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Official and Classified ADVERTISEMENTS

Continued from Page 19

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OFFICE MANAGER

Berwick-upon-Tweed

The Anglo-Scottish Fish Producers' Organisation Limited is a body set up under E.E.C. legislation concerned with the primary marketing of fish and the production of statistical data.

The Headquarters are in Berwick-upon-Tweed and the Office Manager will be responsible for the supervision of a small office staff engaged in data collection and analysis in the first instance. Opportunities for expansion into other activities in the future are anticipated. The successful applicant for the position of Office Manager should be (1) familiar with the Fishing Industry; (2) experienced in accounting and statistical recording systems; (3) experienced in running a small office and the control of staff and (4) have the initiative, drive and flexibility to seek and implement other activities as opportunities allow.

Salary within the range of £5,000 to £5,500 per annum plus Company Car, pension scheme, 4 weeks holiday.

Enquiries and applications to the Chairman, Anglo-Scottish Fish Producers' Organisation Limited, 7 Bridge End, Berwick-upon-Tweed TD15 1HA. Interviews will be in Berwick-upon-Tweed.

TWO young men, English, holding senior deckhand ticket, experienced all types of trawlers, fluent French, seek work inshore or deepsea, references available, Donal Box, telephone Kirkdale 264 (Sydenham, London SE26).

SKIPPER required for modern 50ft. stern trawler, knowledge of Devon and Cornish waters plus all aspects of trawling essential. Write 83 Lodge Way, Wyke Regis, Weymouth, Dorset.

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WANTED hydraulic capstan. Telephone: 0306 66870.

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PUBLIC NOTICE

Notice to Mariners

ROCK DUMPING ON SHELL EXPRO'S GASLINE

We are continuing to dump rock over the FLAGs gasline in the following areas:

DECCA MAINCHAIN 8C CO-ORDINATES

SECTION ALPHA	GREEN D 32.74	PURPLE H 62.26
	GREEN D 33.88	PURPLE H 62.47
SECTION BRAVO	GREEN D 34.48	PURPLE H 61.85
	GREEN D 34.67	PURPLE H 61.36
SECTION CHARLIE	GREEN D 35.81	PURPLE H 60.30
	GREEN D 35.93	PURPLE H 60.00
SECTION DELTA	GREEN D 37.11	PURPLE H 62.36

This operation is being carried out by the barge "Frana" and will now continue into February.

The vessel employed frequently lays to two anchors, the cables of which extend 550 metres up current from the vessel. A wide berth is requested.

Notice to Mariners

ROCK DUMPING ON SHELL EXPRO's GASLINE

Work on the St. Fergus/Brent Gasline is due to resume on the 18/5/78.

The Rock Dumping vessel 'FRANS' will be conducting a survey of the pipeline route from St. Fergus offshore to a position 57° 38.3N 1° 40.21W.

Chain 8C North Scottish. Green 38.3 (corrected). Purple 60.26 (corrected).

Survey work should require two days after which rock dumping will commence for approximately four weeks over parts of this section of pipeline.

The vessel 'FRANS' frequently lays to two anchors, the cables of which extend 550 metres up-current from the vessel.

A wide berth is requested.

ROCK DUMPING

on the St. Fergus/Brent Gasline has been resumed

The rock dumping vessel 'FRANS' is engaged in dumping on section of the line between shore at St. Fergus to position 57° 38.3N 01° 40.21W. Decca Chain 8C North Scottish Green 38.3 (corrected) purple 60.26 (corrected). The rock dumping is presently scheduled to be completed by 9th June 1978.

The vessel 'FRANS' frequently lays to 2 anchors, the cables of which extend 550m up-current from the vessel.

A WIDE BERTH IS REQUESTED

OFFICIAL NOTICE

Proposal to change a ships name

We Donald Turtle of Croft Mason, Rosudgeon, Penzance and Leonard Michael Williams of 44 Bowjey, Penzance, joint owners of the fishing boat "Girl Tet" of Penzance, official number 308776 of gross tonnage 47.65 tons, of registered tonnage 19.10 tons, previously owned by T.S. Thompson of Sunny Corner, Fife Bellview, Newlyn, Penzance; propose to change her name to

GIRL PATRICIA

Any objections must be sent to the Register General of Shipping and Seamen, Llantrisant Road, Cardiff CF5 2YS, within seven days of the appearance of this advertisement.

Signed this 30th day May 1978
Donald Turtle and
Leonard Michael Williams

OFFICIAL notice — Proposal to change a ship's name. I Richard Brooks, 172 Dundridge Lane, Bristol, owner of the fishing vessel 'Ross Resolution' of gross tonnage 555.01, of registered tonnage 199.55, official number 166667, previously owned by Hallyer Bros., Hull, propose to change her name to 'Debut', any objections must be sent to the Registrar of Shipping and Seamen, Llantrisant Road, Cardiff CF5 2YS within seven days of the appearance of this advertisement. Signed R. J. Brooks, date 22nd. May 1978.

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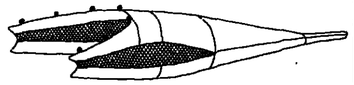

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Ref. No.	Groundrope Length	Price from
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602	7 fathom	£145
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606	14 fathom	£525
607	16 fathom	£650

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Ref. No.	Groundrope Length	Standard	High Lift
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203	7 fathom	£85	£95
204	8 fathom	£105	£125
205	10 fathom	£165	£195
206	12 fathom	£225	£265
207	14 fathom	£285	£325
208	16 fathom	£365	£415

BEAM TRAWLS		WOODEN OTTERSBOARDS	
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12ft.	£68	4ft. 0in.	£85
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Heavy duty shrimp rod ends £15 extra

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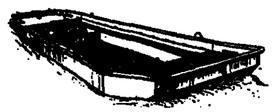
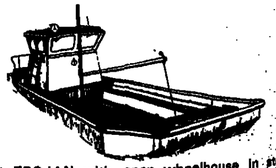
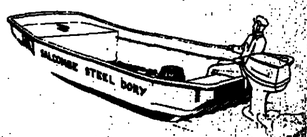


18ft and 24ft TROJAN inboard powered STEEL DORY. Dimensions of larger hull: 24ft x 8ft x 2ft 6in. Carrying capacity 5 tons.



24ft TROJAN with open wheelhouse in steel. Good all-round visibility, wheel steering, engine controls. Simple instrumentation and shelving provided. Carrying capacity 5 tons.



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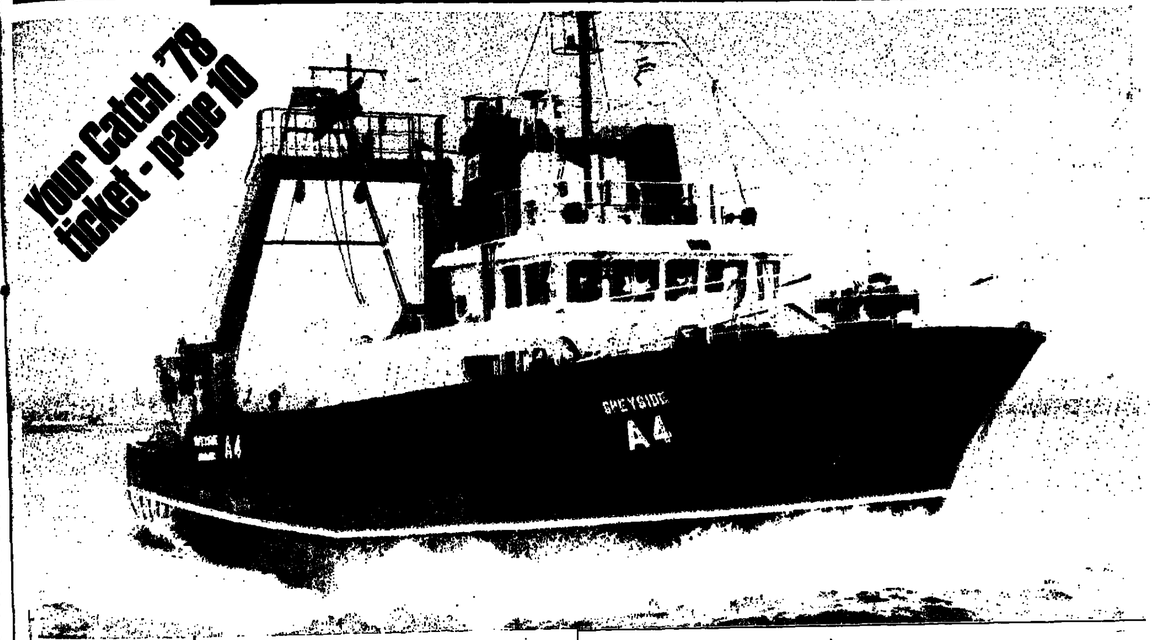

Your Catch '78 ticket - page 10

Speyside is a powerful addition to Aberdeen's fleet. A full review of the 86-footer starts on page 38.

Scottish show number

THIS action-packed 104-page issue of *Fishing News* features attention on Scotland where the *Catch 78* exhibition opens in Aberdeen next Wednesday.

INSIDE:

£11000 FLEET!

Auction saves Milford trio

A LOCAL fish merchant has saved a large part of the Milford Haven trawler fleet. His bids totalling £11,310 bought the three trawlers *Georgina Wilson*, *Jadestar Gypsy* and *Brenda Wilson* which went under the hammer last week.

Head of the fish merchants Rawlings & Co., Peter Wright, out-bid buyers from other ports and also scrap merchants at the auction.

The trawlers came up for sale following the collapse of Hubert Jones Trawlers Ltd. *Georgina Wilson* sold for £5,000, *Jadestar Gypsy* £4,060 and *Brenda Wilson* for £2,250.

Mr. Wright is now awaiting a surveyor's report on the vessels to find out how much it will cost to put them back to sea. Trawler owners in the port are also waiting on plans for cash aid made to the Welsh Development Agency.

Mr. Wright has spent most of his working life in the local industry and, apart from his fish merchanting interests, he also has connections with frozen foods.

Georgina Wilson was built at Hessle in 1955 as *Fairy Cove* for Hartlepool owners. She later worked from Lowestoft and Aberdeen before being bought by the Hazael Fishing Co. of Fleetwood. *Jadestar Gypsy* was built at Selby in 1954 and *Brenda Wilson* was launched at Aberdeen during the same year.

Caledonian—the Champion!

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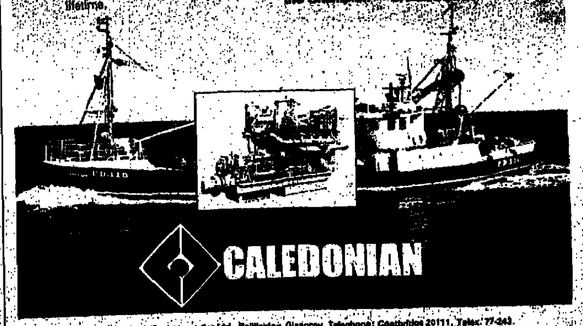

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Norway licences withdrawn

... three trawlers laid-up

THE LATEST setback to the fishing industry at Grimsby is the withdrawal of three distant water fishing licences for the Norwegian sector of the White Sea.

All three licences were held by Consolidated Fisheries and this means the firm has been forced to lay-up *Gillingham*, *Barnsley* and *Notts Forest*. Now the firm has only *Huddersfield Town* still fishing distant waters with its one remaining licence.

The firm has protested most strongly to both the Government and the Ministry of Agriculture, Fisheries and Food.

Barnsley and *Notts Forest* landed their last trips at the Humber port last week and, ironically, *Barnsley's* £36,769 from 1,177 kits was the port's top earning voyage.

Gillingham, which resumed fishing in February after previously being withdrawn because of fishing restrictions, will complete her last trip this week.

So far *Barnsley* is Grimsby's top distant water vessel this year with earnings of over £210,000 from six trips. Approximately 60 more fishermen's jobs have gone.

Having recently scrapped two vessels and with *Aldershot* also out of fishing since early May, Consolidated is now operating just five trawlers — and four of these are fishing in the North Sea and on the Westerlies.

Elsewhere the distant water picture is no brighter. BUT has only *Northern Reward* and *Northern Gift* working on a trip-to-trip basis, plus seven other distant water ships which have now not fished for over six months.

The Boston Group — which like BUT has interests at other ports to consider — has one licence for its wet fish fleet at Grimsby, which *Belgaum* and *Prince Philip* were alternating, although *Boston Halifax* (the group's top vessel which has been undergoing winch modifications for the past month) is expected to take over from *Prince Philip*.

Despite disposing of three distant water ships recently, the firm still has *Boston Boeing*, *Boston Comanche* and *Boston Concord* laid-up, with *Boston Phantom* and *Boston Kestrel* stepped down to middle water fishing.

Barnsley comes home from a Norway coast trip with the week's best trip — to be laid-up.

TOW FOR FIRE SHIP

THE LOWESTOFT trawler *Oulton Queen* had her engine out of action following a switchboard fire on Tuesday evening about 100 miles off the Humber. She was expected back in her home port yesterday (Thursday).

She was being towed back to port by another Yarmouth trawler, *Norton Queen*.

Oulton Queen's crew were transferred to another Lowestoft trawler, *Boston Jet Fury*, when the fire started. Her skipper, Mr. Alan Hutchinson, and the chief engineer stayed on board until the fire was put out. The crew then returned. There were no injuries.

Another show

A FISHING exhibition is to be staged in Denmark next year. Eurofish '79, taking place in Copenhagen from June 26 to July 1, 1979, is being organised by Industrial and Trade Fairs International Ltd.

An international fishing conference is being planned in conjunction with the show.

Eurofish '79 is the latest in the *World Fishing* exhibition series.

THUMBS DOWN GIVEN TO PAY RISE

BRITISH trawlermen have rejected a ten per cent pay increase from the trawler owners which included improved sea, shore and holiday rates.

Unless the owners come up with an improved offer to the satisfaction of the crews and the TGWU — which represents the men — the issue seems likely to end up with the Arbitration and Conciliation Advisory Service.

As part of any new package the union and the trawlermen want to see the present poundage payments altered.

At Grimsby these have remained at 68p in every £100 gross for some years, but with trawler catches getting smaller all the time through quota fishing and the loss of important grounds like Iceland, the men claim smaller catches mean less poundage.

The owners say increased market prices for fish have kept the poundage payments well in keeping with the old levels.

fishing news

Editor: **Harry Barrett**

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Scottish correspondent: **Gloria Wilson**

Advertisement Director: **Fred Purssell**

Advertisement Manager: **Bill Barber**

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SCOTLAND — forward into the dark

THE SCENE is set next week for yet another demonstration of Scottish fishing power. This time it will take place ashore, when the *Catch '78* fishing exhibition opens its doors at Aberdeen on Wednesday.

Despite all the talk among exhibitors about using Aberdeen as an international showcase for their products, the real attraction for them is the seemingly bottomless pockets of Scottish skippers, when it comes to forking out money on new boats and gear.

The orders are expected to flow again as they have done at past Scottish exhibitions, but this time there will be a difference. Not only will fishermen have to dig deep in their pockets, they will also have to draw on all their courage. Because this time they will be buying "blind," not knowing what the future and especially the EEC holds for them.

COMMENT

Efficient tools

All the instincts, so traditional in Scottish fishermen, will be at work encouraging them to buy and equip their boats as efficient fishing tools. But cold logic will be asking if the future is bright enough to warrant such heavy investment?

The dilemma is particularly obvious at Aberdeen where a large section of the trawling fleet is nearing the end of its days. Because they need to stay in fishing, companies have been forced to start building new vessels without any real idea of the restrictions they will be operating under.

Since the late 1960's the progress and returns of the Scottish fleet have been phenomenal. Earnings are still being pushed up with a £38m catch in the first quarter of this year — nearly £2m up on the previous year. From these early results there are already danger signs represented by an 11 per cent drop in the catch.

All that is happening is that quayside prices are managing to keep ahead of conservation measures, which are really starting to bite. The big fear is how long is it before the price bubble bursts and no longer shields the declining catch situation? One thing is for sure, the consumer will not go on paying any price to eat fish.

Certainly, Scottish fishermen are well aware of the dangerous levels to which many of the traditional stocks have sunk. With a complete ban already on North Sea herring, haddock prospects in this area also looking very sick. On the west coast, the herring situation is equally frightening.

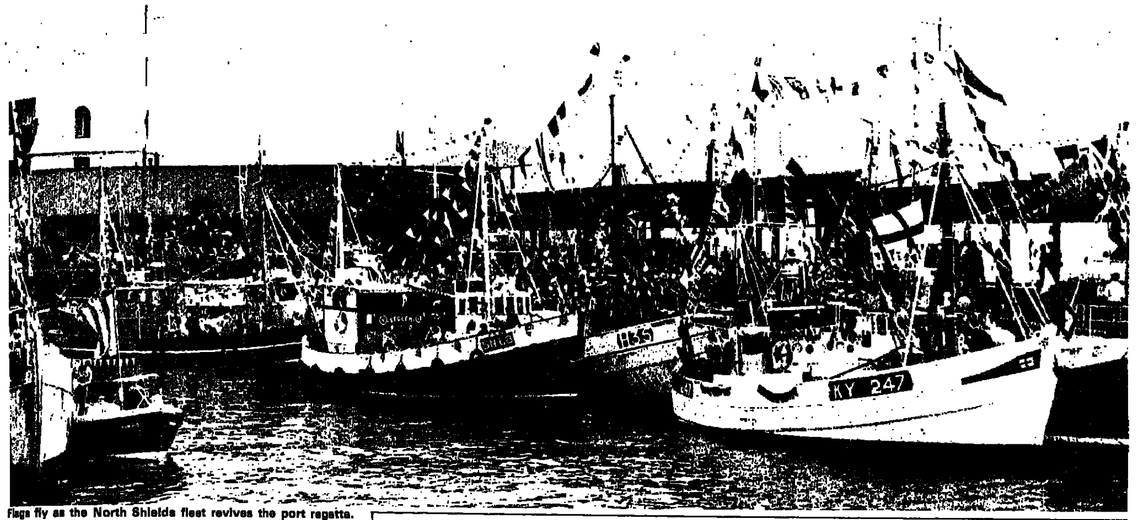
Bravely, some Scottish representatives are calling on the Government for more stringent conservation measures. This could be a dangerous course, because whatever the British Government does unilaterally, the EEC insists that any action must not be discriminatory. Which leads to the question of whether Scottish herring men would accept a complete ban on the west coast, as scientists recommend.

The main fear is that a complete closedown on west coast herring would bring a sharp retaliation from Norway and Faroe. Both these third countries have a stake in the west coast herring through an agreement with the EEC.

Time-bomb

The proposal by ICES scientists for a total herring ban represents something of a time-bomb ticking away beneath the industry. There would be dire consequences, not only for the Scottish fleet but for the English trawler fleet as well, if Norway and Faroe put an end to reciprocal fishing arrangements.

One thing the Government must do quickly if it wants to retain the faith of men who through their Producer Organisations have imposed voluntary quota systems upon themselves is to sort out what is to be done about the inshore members who fish indiscriminately. This is a question of crucial importance to the future of PO's, especially in Scotland where the organisations have set the pace when it comes to acting responsibly.



Flags fly as the North Shields fleet revives the port regatta.

SHIELDS REGATTA SUCCESS

THOUSANDS turned out last week to watch the first North Shields fishing regatta since the turn of the century—there was even a Fleet Queen.

Stephen Cross, superintendent of the Fishermen's Mission at North Shields and organiser of the event, said he was surprised and delighted at the number of people.

"Following the success of this one, there is certain to be another next year," he said.

The aim of the occasion had been to bring together fishing families in North Shields, and in fact very little money had been raised for the mission.

"Now, realising the potential, we hope next year to raise some funds for the mission, which does run at deficit," said Mr. Cross.

For 1979 he has been told that North Shields boats will be joined by vessels from Blyth and local coble owners have also said they will be there.

Judges

Boats in the procession were judged by the Mayor and Mayoress of North Shields, Coun. and Mrs John Dixon.

Overall winner, and winner of the large boat class (over 60ft.), was *Lothian Rose* skippered by Jimmy Bailey. He 'borrowed' the boat from a visiting Scottish skipper after his own had broken down.

Winner of the medium class (60ft.) was *Obilak*, skippered by Dickie Leighton, and the small boat class was won by *Tudor Times* (Skipper Ned Armstrong).

Queen of the Fleet was Debby Hill (18), who represented Newington Trawlers' *Burton Agnes*.

Sunbeam lands maiden

A BOX of haddock sold for £100 at Peterhead last week — but it was no ordinary box.

It was the first to be sold in a maiden catch of 391 boxes by Skipper William S. Smith of Lossiemouth and his crew of the Inverness-registered *Sunbeam*.

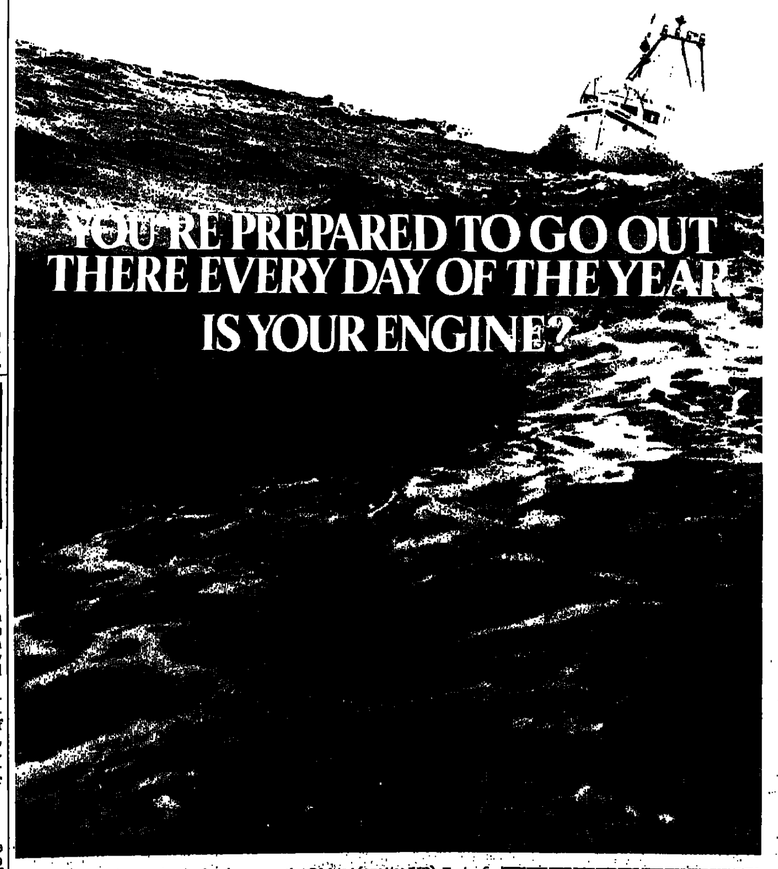
There was keen competition among buyers when auctioneer, Graham Lawrie of Grampian Sea Fishing Ltd., offered the fish for sale. George Hosie, Aberdeen, outbid his rivals to qualify for the traditional new hat.

Mission

Skipper Smith donated the proceeds from the first box to the Lossiemouth branch of the Royal National Mission to Deep Sea Fishermen.

The 85 ft. wood-built *Sunbeam* was ordered from the Peterhead yard of Richard Irvin and Sons to replace a 75 ft. vessel of the same name built at the same yard. The vessel is to be reviewed in next week's *Fishing News*.

Skipper Smith has been one of the most successful fishermen operating from Peterhead for many years.



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Pair trawlers' big debut

LIMANDA, the wooden multi-purpose vessel bought locally at the end of last year by Consolidated Fisheries, got off to a great start pair trawling with the Danbrit-agented *Taarnborg* last week.

The new team collected £20,412 from a 13-day trip, of which Consolidated's vessel made £10,957.

It is not the first time *Limanda* has operated as a pair trawler. Before being sold to Consolidated she had several spells with different Richardson partners.

However, the four-year-old vessel then settled-down as a conventional anchor-seiner and for well over a year, under Skipper Harry Thomsen, was one of Grimsby's top seiners.

Limanda has been working as an anchor-seiner with Consolidated this year, and since her sale she has been under the command of Skipper David Rose. Being experienced both in seining and pair fishing, the changeover gave him few problems.

Taarnborg had been pair trawling under Skipper Johnny Hill since coming off the winter sprats with *Leanda*.

It is the first time Consolidated has had a pair trawler working through its offices, but the company is looking at this aspect of the local industry very closely.

Skipper David Rose of *Limanda* (far left). She is now pair trawling with the Danbrit-agented *Taarnborg*.

MEGRIMS TAKE TOP SPOT AT FLEETWOOD

FLEETWOOD had one of its biggest landings of megrims in years last week when the French stern trawler *Kereon* put into port with 65 kits of the variety.

In addition the vessel landed 30 of hake, 45 of cod, 250 of haddocks, 15 of whitings, 70 of coley and 2½ of ling in her total of 702 which sold for £20,533 — the week's biggest grossing.

But not far behind was a local ship — the stern trawler *Boston Stirling*. Skipper Bill Bridge continued a good run in the vessel by bringing her back to port with 735 kits — 310 of cod, 150 of haddocks, 280 of coley and four of hake — which sold for a total of £19,657.

For the stern trawler *Luneda* there was a smaller catch — a disappointing 586 kits — but with fishing on the middle water grounds slack it was not surprising. The vessel's 586 kits sold for a total of £16,006.

Also hit by slack middle-water fishing was the large side trawler *Ella Hewett*. She was out on an 18 day trip and caught 456 kits — 170 of cod, 120 of haddocks, 19 of whitings, 40 of coley and 76 of dogs — which sold for £12,949. This resulted in a loss on the voyage.

Quality

Top near water trawler was *London Town*, commanded by Skipper Jim Buckle, which made £7,784 from 5[illegible] kits. But the far smaller beam trawler *Marrie Jacob*, an Irish vessel, proved that quality can often outweigh quantity when she landed just 50 kits — more than 40 of soles — to make £6,413.

There were again big prices for most varieties.

Boats diverted

DUTCH HAVE TO LUMP IT

FLEETWOOD'S Dutch connection — for the transhipment of soles to Holland — hit a snag last week when a demand by lumpers for £3 a man extra for landing the boxed fish was refused.

This resulted in two Dutch beamers, *Marco* and *Johanna Cornelia*, being diverted to nearby Glasson Dock where the crews unloaded their fish on to trailers for shipment to Holland.

Talks between the lumpers and Fleetwood owners on Wednesday last week ended in deadlock and more Dutch vessels had to put into Glasson to land catches.

Mixed

It was in the late 1960s that Dutch beam trawlers began using Fleetwood as a landing base during the Morecambe Bay sole season.

Their soles — apart from small quantities of large — were always sent to Holland, but what mixed varieties they caught were sold on the local market. Last week talks were being arranged and, also, on the matter of landings from Iceland at the port, which have been banned by lumpers.

Colne's St John is back

THE Colne Group's [illegible] trawler *St. John*, damaged [illegible] the bow some weeks ago, [illegible] now back in service. She [illegible] had a new bow section [illegible] following a collision.

The work of fabricating the new section was done by George Prior Engineering [illegible] Yarmouth and the fitting [illegible] carried out by the firm [illegible] Lowestoft dry dock and [illegible] the nearby Docks and [illegible] Quay.

The vessel was [illegible] on ice last Saturday [illegible] sail for the North [illegible] either that day or [illegible] week-end [illegible]

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CRAB POT SNATCHER JAILED

OVER £1,000 worth of crab pots and rope have been stolen off the Dorset coast.

Fishermen have lost their livelihoods because of the activities of Nigel Charlton (34) of Wakeham, Portland, the island magistrates said.

Mr. Charlton, married with four children, stole pots off Durdle Dor and Portland to equip his own boat.

He was desperate because poor weather and low catches had made it difficult for him to keep up repayments of £120 a month on *Bon Ami*, said his solicitor, Anthony Hunt.

"He is most unpopular and has to rub shoulders with the very fishermen from whom he stole", he said.

Mr. Charlton admitted four charges of theft and was fined £100, jailed for three months, suspended for a year and ordered to pay £430 compensation.

'Big ship' slip for Lowestoft

LOWESTOFT is to have a new slipway capable of taking vessels up to 600 tons. It will replace a 70-year-old wooden slipway built by a former Lowestoft shipbuilding firm which has been disused for the last seven years.

A six-figure contract for the work, including steel piling and the reinforced concrete slipway, has been placed with the Ipswich office of Tilbury Construction Ltd. by George Prior Engineering of Great Yarmouth.

The old Laundry Lane slipway, as it is known at the port, was used during the last war for repairing MTBs and was later taken over by the British Transport Docks Board.

In recent years Lowestoft trawler owners have often had to send vessels to other ports because of the lack of slipping facilities in Lowestoft. In many cases ships have had to be sent across the North Sea because of the long waiting list.

George Prior, whose firm recently fitted a new bow section to the Lowestoft trawler *St. John* after she was involved in a collision, said he had already received a number of inquiries from ship owners about the opening date.

Work is due to start next month and be completed in six months.

TWO Hull trawlers back from Bear Island and the White Sea trips had total landings at Hull on Monday of 2,452 kits. Hamling's *St. Geontious* (Sk. P. Grayburn) grossed £23,466 for 1,444 kits, while BUT's *Lord St. Vincent* made £23,877 for 1,018 kits.

MAN (73) DROWNS

BRITISH Transport Docks Board police had to call in divers last week to recover the body of the watchman from the Grimsby seine-netter *Scanboy* after he had been reported missing.

Later the body of 73-year-old William Thomas Dainty was discovered in the No. two fish dock by Doughty's Jetty, where *Scanboy* had been berthed.

Mr. Dainty leaves a wife and a grown-up family. He had been a watchman on seine netters for a number of years and was considered by Sleight to be one of its most reliable.

Problems of GRP tanks

LETTERS

SIR, In the "John Burgess Log" (May 26) a reader enquired about moulding a GRP water tank into a GRP hull and the possible risk of pollution of the fresh water.

We would advise that we have some experience of problems arising due to styrene contamination of the drinking water in such tanks. Briefly, the styrene pollutants appear to be given off from blisters in the tank gel-coating. The reasons for such blistering are numerous, but the oft quoted "osmosis" is certainly one.

Research into the cause and effect of GRP blistering has been, and is being, carried out by numerous bodies. What your correspondent wants to know is whether the affected water will be safe to drink and we can only say, at present, that there appears to be considerable doubt on this score.

We do know of a senior hospital consultant who changed his affected water tank to stainless steel because he is of the opinion that such water, if consumed, can cause cancer.

We would point out that there have been a number of short articles on this topic in yachting magazines of late, but none appears to be very factual. You can rest assured that the polluted water tastes absolutely foul, even with only trace elements present.

We are at present engaged in investigating the possible health hazards but, at this time, would suggest that your correspondent fits a stainless steel tank of good quality, with an access hatch as suggested by Mr. Burgess.

If your correspondent has now built in his tank and cannot easily alter it, he may be able to fit a rubber or plastic tank inside if he can get his filling and supply pipes connected up without too much difficulty.

B. L. SMITH,
E. K. Wallace & Son,
11 Bothwell Street,
Glasgow G2 6LY.

Echo sounders—keep them in perspective

SIR, After reading John Burgess' Log we feel motivated to offer some constructive criticism relating to the article headed 'Detecting flat fish on the seabed' (May 26).

As a company which has had a long and varied career in the application and supply of fish-finding echo sounders, we feel suitably qualified to express our sentiments on the subject.

Firstly, contrary to the opinion expressed in the article in question, 'flat fish' are emphatically not readily detectable by echo sounding devices. Perhaps the strongest reason is that this particular marine group has developed due to its bottom living existence without a buoyancy regulating swimbladder.

The presence of this pocket of gas in other species, including the cod family, causes a prominent echo return, but their absence in plaice, sole, etc., results in a poor sounding target. It is true that high frequency echo sounders will detect fish without swimbladders such as mackerel but, normally, a clear indication can only be obtained when sounding tightly grouped mid-water shoals.

The second point which reduces probability of detection is as personally observed by the writer that plaice, sole, dabs etc., spend much of their life fully or partially submerged in sand or light mud and very rarely swim more than a few inches above the bottom.

Although the propagation of sound is, of course, affected by the properties of the reflecting surface, there is no echo sounder in existence which has the resolution and narrow beam width to distinguish between the poor target of a part-buried fish and its surroundings.

Thirdly, the correct function of white-line type mechanisms are not to detect 'flat fish' as indicated in the article, but to clarify the echoes of bait-pelagic species such as cod, haddock, or blue whiting feeding close to the bottom.

In summary it must be stressed that echo sounders are sound emitting devices consequently complying with conventional laws of refraction and reflection.

Useful

This fact and the related limitations should be kept in perspective as, although echo sounders are very useful instruments when operated correctly, they do not as some people may think bear any resemblance to a 'Star Trek' style life sensor.

Should, however, Mr. Burgess know of such a machine, I am sure the east coast inshore industry would be very anxious to hear from him!

STEPHEN E. HOLMES,
(for and on behalf of),
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Above: the new Lifeguard liferaft which offers good value for money but, as yet, no DTI approval.

Above right: the only wooden boat in the show was this Poole Punt, made by Lytchett Bay Boat Yard of Poole.

Smaller hulls pull orders at Plymouth

THE WEST *Country Boat Show* which closed last week was notable for a big range of fishing boat exhibits for inshoremen.

With the country's major fishing exhibition firmly settled in Aberdeen, it appears that the West Country builders use this show to attack the local market. The event is now in its sixth year.

In sheer size the boat section was dominated by the 37ft. GRP hull from Cygnus Marine. But it was in the smaller hulls in this range which attracted the orders.

Halfway through the show, one 32, two 26s and one 21 had been sold, but it is significant that none of these are being sold in a completed state. More and more fishermen appear to be fitting out their own hulls.

Polished

The Cygnus boats are getting a very polished appearance with their moulded hatches and wheelhouses. It is only by this sort of progress that they can keep ahead of the opposition — and the strength of the opposition is mounting.

Treeve Marine, whose range is growing to Cygnus-like proportions, had sold five boats by the mid-way point in the show. Two were 25-footers, one of which is bound for Salcombe with a 30hp Lister diesel. The other is being completed as an angling boat for Dartmouth.

The Treeve Cove Boat — a very pretty 16-footer — is finding great favour with the beach fishermen of Cornwall. The seventh hull of this type was sold at the show.

Treeve Marine also had *drawings of its 34-footer* which will be built initially in foam sandwich or C-Flex. The first of these will be going to the Channel Islands. A 20-footer is also on the stocks.

Aquarius Marine, which is based at the old Porthleven Shipyard, is the latest builder to join the battle. It was exhibiting its new 30-footer, the first completed boat of this type being delivered to an owner at Newquay this week. This big end of the hull range drew many enquiries plus orders for 27 and 30 footers.

Versatility was exhibiting its 30ft. hull through local agents and this firm, together with Avon Brunel Marine which builds steel boats, reported a high level of enquiries which justified coming to the show.

Amongst small boats on show which attracted the attention of fishermen was the ever-popular Plymouth Pilot in 16 and 18 ft. versions. The Monachorum Manufacturing Co. has built over 1000 of the hulls and has no plans to change a successful formula.

Tamar Boat Enterprises was exhibiting its Fisherman 2000, four of which have been sold to Scottish fishermen, and these will have an offset wheelhouse to give more usable deck space. They have a larger version at the planning stage which will take either single or twin screws.

Economy

On the engine front there was little activity and hardly anything new apart from the range of Fiat diesels. Fiat is making determined efforts to get into the fishing boat market, claiming both good fuel economy and a competitive price.

For the show, Fiat Southern England agent Winters Marine, was showing Brunton's propeller with particular emphasis on the new four-bladed unit which proved very successful on a Cygnus hull recently completed by Weston Workboats. The Aquarius boat at the show was fitted with a Fiat diesel.

Among new equipment at the show was a one-ton version of the Celtic Slave hauler. This extends the range and breaks new ground by having the hauler sheave made from forged stainless steel, a feature claimed to give a much longer working life.

Transatlantic Fishing Systems was also showing a new line hauler which incorporates a simple mounting plate. All bearings are now contained in the motor housing to simplify installation and maintenance. Pull of this hauler is 1,100 lb. The firm was also exhibiting a portable fish and meat smoker designed for domestic use.

Here it was competing with the inimitable Mr. Leakey, who was busy demonstrating both his smoker and his fishing systems.

A new liferaft at a competitive price was being shown by Western Seacraft. This is the Lifeguard made in both four and six man versions but, as yet, does not have DTI approval (this is expected shortly).

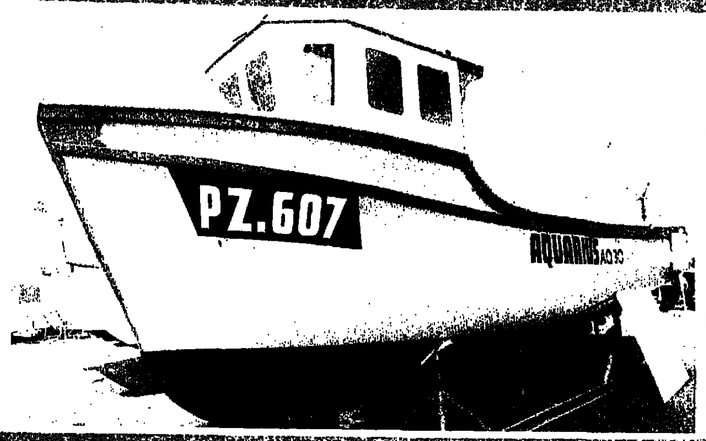
Unique

Plymouth had nearly half of its exhibits of interest to fishermen. In this it is unique and the organisers and exhibitors were rewarded by a large turn out of potential customers. The fine weather — very necessary for this type of open air show — perhaps kept some customers away because the same weather which is good for the exhibition is also good for fishing.

Altogether a very successful show and one where the battle for fishing boat orders started to hot up. The firms which can win *orders on their home ground* are likely to do well elsewhere in the British fishing market.

Right: on show for the first time is the new 30-footer from Aquarius Boats of Porthleven, Cornwall.

Below: South Western Mechanised Fishing's new 1000 kg. Celtic Slave hauler.



The Cove Boat attracted a lot of attention at the Treeve Marine stand.

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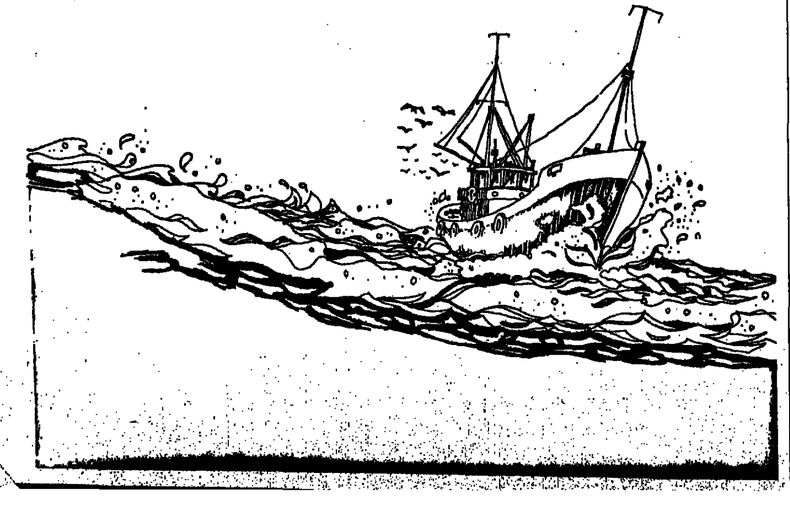

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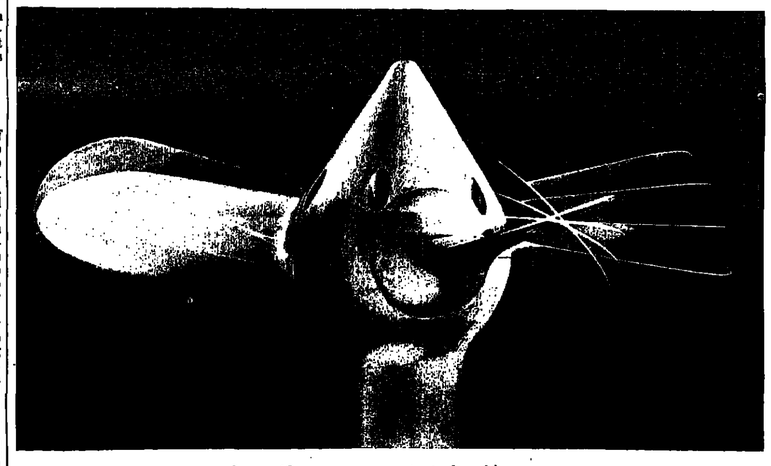

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Side-fishers for Africa

TWO OF Fleetwood's most successful side trawlers were due to leave for Africa this week to begin a new fishing career out of the Ghanaian port of Tema. The ships are involved in a deal between the firm and an African company, but their departure was delayed by currency difficulties.

The vessels *Maretta* and *Arlanda* were on oil rig stand-by work before their sale but now revert to their original role.

Maretta was built in 1965 at Beverley and made her name by being top ship at Fleetwood two years running. At that time she was commanded by Skipper Syd Christy who worked the east side of Iceland.

Arlanda was also commanded by Syd Christy and Skipper Tom Christy as well. He had a successful run in the vessel on the middle-water grounds and she ended up as top ship on more than one occasion.

For the voyage to Africa, *Maretta* is commanded by Skipper Mick Patterson of Hull and *Arlanda* by Skipper John Dunne of Fleetwood.

When they arrive most of the delivery crews will fly home, apart from Skipper Dunne, and chief engineers, Nick Southworth and Max Gramann, who are to stay at Tema to train the African crews taking over from them.

This latest sale continues a series of sales of Fleetwood vessels to Africa — ranging from side trawlers to modern inshore vessels.

DEEPSEA MEN URGED TO SAIL WEST

TRAWLING DOWN to 600 fathoms off the west coast of Britain is regarded as a commercial catching proposition. Deepwater species could help to eke out diminishing quotas of cod and haddock, says a report issued by the MAFF Laboratory at Lowestoft.

Experimental fishing on the continental shelf to the west of Britain produced catch rates on some grounds equal to traditional distant water fisheries. The big difference was the species of fish.

Among what were considered to be the more marketable species, the *grenadier* provided the biggest hauls. Catches were taken on all sections of the continental shelf with the most prolific hauls being made between Tory and Sulisker. After only limited surveys on areas like Bill Baily and Faroe, it is thought that these might provide even bigger catches of *grenadier*.

Grenadiers were found in most depths between 350 and 550 fathoms, but the fish were discovered to be concentrated in a narrow depth range.

Found almost everywhere were *black scabbard*, with the heaviest concentrations from Tory to Sulisker and on Rosemary Bank.

Good quality

The report concludes by saying: "With the present high price of fish it is difficult to believe that, given a proper programme of market research and advertising, there is no market in this country for good quality fish if available all the year round at 20 per cent less cost than cod."

New deep-water trawling grounds to the west of Britain, by J. P. Bridger. Laboratory leaflet No.41, Lowestoft.

OBITUARY

FLEETWOOD SKIPPER

FORMER Fleetwood skipper, Ernest Wright, has died at the age of 85. Mr. Wright came from a Brixham family and was known at the port as "Dawn" Wright.

He mainly sailed for J. Marr and Son Ltd. and served in the Royal Navy during the First World War. He skippered new and middle water vessels.

REGGIE WOODGATE, who became a well-known personality in the Fleetwood fishing industry after coming to the port in 1929 with the Iago Co. from Milford Haven, has died aged 80.

Mr. Woodgate was a ship's husband.

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Net partnership

THE fishing net manufacturers J. & W. Stuart Ltd. will shortly operate as a partnership between John R. Stuart and Bridport-Gundry (Holdings) Ltd.

J. & W. Stuart Ltd. will continue under the present management with Mr. Stuart, who is managing director. Bill Summers and Walter Hay will become directors responsible for production and sales respectively.

Manufacturing will continue at Esk Mills, Musselburgh, where it is planned to expand production in redeployed premises, and at branches in Lowestoft, Fraserburgh and Buckie.

The net-making interest of J. & W. Stuart Ltd. in Angola and Portugal will continue under separate UK ownership and management.

STILL THERE

NEWINGTON'S *C. S. Forester* remains on top of the Hull Distant Water Challenge Shield Competition monthly table.

However Marr's *Westella* recently regained second place over Hamling's *St. Dominic*.

The table below shows the latest top ten vessels with figures in brackets for positions held the previous month.

Position	Vessel	Kits landed	Points
1 (1)	*C. S. Forester* (Newington)	10,833	24,603
2 (3)	*Westella* (Marr)	7,236	16,368
3 (2)	*St. Dominic* (Hamling)	6,428	15,114
4 (5)	*Somerset Maugham* (Newington)	5,940	13,738
5 (6)	*St. Giles* (Hamling)	5,212	12,794
6 (4)	*Arctic Cavalier* (Boyd)	5,697	12,657
7 (8)	*St. Gerontius* (Hamling)	4,750	10,693
8 (7)	*Arctic Vandal* (Boyd)	4,129	10,394
9(10)	*Ross Sirius* (Boyd)	2,837	6,611
10 (9)	*Arctic Rebel* (Boyd)	1,137	3,269

Fifth tragedy

TRAGEDY has struck the Weymouth, Dorset, trawler *Gull Maren* (LT 101) for a fifth time.

Fishing three miles west of Portland Bill early on Wednesday last week, crew member Alan Ellery was dragged over the side by the gear.

Mr. Ellery, who was in his thirties, was brought back to the boat by Skipper Dave Pitman and two other crew members, but attempts to revive him were unsuccessful. He leaves a wife and two young children.

The 50 ft. *Gull Maren* was originally built in Scandinavia, but was sold to an east coast skipper when the foreign owner shot himself. This was not to be the last suicide aboard the Lowestoft-registered boat. Her next owner hung himself.

When the boat came into the hands of the Pitman family she was still to be dogged with bad luck. A crew member attempting to board her was drowned when he fell between the boat and the quay.

The present skipper's father, who was then in command, died tragically some while later.

The boat has been plagued by engine troubles and the boat's future is now uncertain.

Protest over oil search

ROBERT ADLEY, MP for Christchurch and Lymington, has written to the Department of Trade to protest about the plans of the American oil company, Gulf.

It is proposing to search the seabed for oil between Poole and Selsey using an oil research boat which will disrupt the work of fishermen from Christchurch, Keyhaven and Lymington. Fishermen fear damage to their pots and also loss of earnings.

Mr. Adley said that Gulf, who have contacted the local oil company say they have refused to co-operate in any way.

THE DOGS ARE RUNNING

GRIMSBY'S seasonal summer line fishing for dogs really got into its stride last week with several early landings.

A double landing during the week by Skipper David Hunt's Lowestoft-registered inshore boat *Alison Jane* produced 182 kits which found plenty of buyers willing to go well over £35 per kit for large fish.

A spokesman for agents, Sam Chapman & Sons Ltd., told *Fishing News* it had been a very good start with the large fish selling especially well.

Good start

Chapman also brought in *Pioneer*, now under the command of Skipper Ron Lusher (formerly of *Sparkling Star*). *Pioneer* (KY 35) made a nice start with mostly small fish which averaged nearly £24 per kit.

Also on the inshore side the Hamling-agented *Salee*, down from Scarborough, grossed £1,753 from 45 kits, mainly of cod, whilst Tom Sleight had the former Grimsby-based inshore *Willemina* landing to its agency again and from 30 kits, mostly of roker, the inshore boat made £1,432.

BIG POACHING PENALTIES

Ireland gets tough at last

NEW regulations providing for a massive increase in the penalties for illegal fishing and the confiscation of gear and catch are to be introduced in Ireland.

Parliament in Dublin will begin to consider a comprehensive new Bill within two weeks and, because of pressure from fishermen and the national interest, it is expected to have a speedy passage through the House.

At present the maximum Irish fine is £100, because a High Court judgement decided that the lower District Courts did not have the power to order the confiscation of gear and catch after conviction for illegal fishing.

As forecast in *Fishing News* recently, following the announcement by the Opposition that it would present its own Private Bill to increase penalties for illegal fishing, the Minister responsible, Brian Lenihan, has announced that the new Bill will be introduced within a fortnight.

Some reports say that fines as high as £100,000 may be proposed in the new Bill, which will demonstrate the Government's determination to make illegal fishing in Irish waters unprofitable.

The Irish Government has also announced an agreement with the EEC to reduce by half the number of Spanish fishing licences in Irish waters.

SCOTS UNDER NEW BANNER

PELAGIC fishermen in Scotland will hold their first meeting under a new corporate image at Fraserburgh today (Friday).

For the past 50 years they have operated under a Scottish Herring Producers' Association banner. Now they will come under the title of Scottish Pelagic Fishermen's Association.

Roddy McColl, their Aberdeen-based secretary, said that not so much herring was being taken nowadays, and the former name was not representative of many members' activities which have extended to mackerel, sprat and other pelagic operations.

Shortage of supplies coupled with restrictions and quotas have greatly reduced the size of the herring fleet. The North Sea was closed and the West Coast quotas were restricted.

Representatives of the Scottish White Fish Producers' Association, Clyde, Mallaig, and North West Firth of Firth Fishermen's Association will be present at today's meeting to discuss the implications if a ban on West Coast herring were to be imposed.

Mr McColl added that in view of a recommendation by a scientific working group of a ban on the West Coast fishery, the meeting would look into the consequences if this is imposed.

Fishermen are concerned that closure of the fishery would trigger off reciprocal action from Faroe and Norway which through agreements with the EEC were allowed quotas of West Coast herring.

Today's meeting was being held in the knowledge that EEC Ministers will discuss herring at the next round of their talks at Luxembourg on June 19.

The Anglo/Scottish Producers' Organisation also meet today. They will discuss the question of non-member boats using voluntary quotas set by the fishermen to conserve diminishing stock.

The Government had been given until June 5 to come up with some form of control over the renegade boats. The Scottish Fishermen's Organisation representatives will also meet at Fraserburgh, where they will discuss the matter.

It is understood that the Department of Agriculture & Fisheries for Scotland will meet industry representatives towards the middle of this month.

A full time business

To the townsman, fishing is an outdoor life. To the fisherman burning the midnight oil over piles of paperwork, it's a full time business where there are no early closing days and where a head for figures is as important as an eye for the weather.

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BANK OF SCOTLAND

SHOWTIME IN ABERDEEN

The success of Catch '76 (below) looks like being repeated when the show opens on Wednesday next week at the Queen's Links, Aberdeen. *The range of exhibits is larger than in 1976 and there is a true international flavour with exhibits coming from a large number of overseas countries. The show has a five-day run.*

list of exhibitors

	Stand No.
Abergien Holdings Ltd.	A264
Advance Design Developments	A261B
Afos Ltd.	B524
Alcoa of Great Britain Ltd.	B802
Alexian Electronics Ltd.	B600
Allibert Container Division	B732
Anderson Packaging (Aberdeen) Ltd.	A414
Anglessey Fire Protection	A103
Anglo Belgian Diesel Co. (UK) Ltd.	A362
Aquarius Marine	Outside Display
Arenco AB	B730
Ashton Containers Ltd.	B650
Avon-Brunel Marine Ltd.	A412
F. Barnford & Co.	B700
Bank of Scotland	B630
Bideford Shipyard (1973) Ltd.	B506
S. & P. Blair Engineers	B692B
Boris Net Co.	A139
Jas Bowen & Co.	B692E
Bridon Fibres & Plastics Ltd.	B548/B550
Bridport-Gundry Ltd.	A430
British Brown-Boveri Ltd.	B774
British Marine Equipment Council	A396
Henry Browne & Son Ltd.	A121
S. G. Brown Ltd.	B804
Brunton's Propellers Ltd.	B806
Caledonian Tractor & Equipment	A119
Campbeltown Shipyard Ltd.	A141
Cattermarine	B536
Challenger Diving	A261c
Christian Salvesen (*Fish Selling*)	B680D
Clydesdale Bank Ltd.	A268
Colts Engineering Co.	B516
Cosalt Ltd.	B780
C-Power (Marine) Ltd.	B508
Cummins Engine Co.	A306
Cygnus Marine Ltd.	Outside Display
Danish Export Group Association	A230 & A260 & A330
The Decca Navigator Co.	A360
Deebridge Electrical Engineers Ltd.	A438
Department of Agriculture & Fisheries for Scotland	B602
Department of Trade & Industry	B800
Dorman Diesels Ltd.	A117
DRG Merton Packaging	B504
M. G. Duff & Partners Ltd.	B520
J. F. Duffield & Partners	B692D
Duncan Rogers (Engineering) Ltd.	A292
Electronic Laboratories (Marine) Ltd.	B544
Enterprise Sheet Metal Co.	B518
Euro-Catch '79	A265
Euroclean Ltd.	B834
European Marine & Machinery *Agencies*	A208
The Export Council of Norway	B670 & B770
Eyemouth Engineering Co.	B680G
F. A. L. Scottish Propeller Service	A125
Ferguson & Timpson Ltd.	B680C
Graham Ferrier & Co.	B750
Fisadco Ltd.	B512 & B514
Fishing Hydraulics (Scotland) Ltd.	A296 & A298
"Fishing News", "Fishing News International" & "Fish Farming"	A109
Henry Fleetwood & Sons (Marine) Ltd.	A210
Andrew Fraser & Co.	A440
Andrew Galloway	A261A
GEC — Marconi Electronics Ltd.	B704
Gerrard Industries	B852
James Greig (Wireworks) Ltd.	A408
Gordian Strapping Ltd.	B500
GPG Products Ltd.	B676
Helmatic (Scotland) Ltd.	*Outside Display*
AB Hedemora Verkstader	A308
Highlands & Islands Development Board	B752
Hull Steelcraft Co. Ltd.	B502
Hundested Motor & Propellerfabrik	A400
I.M.P. (UK) Ltd.	A406
Inco Ziegra (UK) Ltd.	A202 & A204
Jackson Trawls (see Bridport-Gundry)	A434
Joint Trawlers Ltd.	A365
Jotun-Henry Clark Ltd.	A131
Kelvin Diesels Ltd.	A262
Kelvin Hughes	B760
Kempsafe Ltd.	B641
W. & J. Knox Ltd.	B808
Krupp Atlas Elektronik	A442
R. & B. Leakey	B692J
Samuel Ledray & Sons Ltd.	B638
R. A. Lister & Co. (Marine Division)	A390
Lossie Hydraulic Co.	A300
Lucas Marine Ltd.	A105
Edward Macbean & Co.	A432
Macros (Ardrishaig) Ltd.	B646
Marine & Industrial Transmissions	B690
Maurer & Sohne	A290
McTay Miller	B646
Mirrless Blackstone	A291
Moba B. V. (UK) Ltd.	B634
Morep Ltd.	B622, B624 & B626
The Napier Co. (Arbroath)	A123
Neco Communications Ltd.	B776
Nowage Engineers Ltd.	A208
Nordischer Maschinenbau Rud	B632
Norgear A/S	B642
Hugh Norman (Marine Sales) Ltd.	A101
Northern Tool & Gear Co.	A135 & A137
North Sea Winches	A424
Odd J. Solnordal	B624
Orkney Boatbuilders Association	B836 & Outside Display
Parsons Chain Co.	B702
Peterhead Harbours	B818
Peiters Co.	A408
Petters Ltd.	A392
Post Office Telecommunications	B790
PSIMAT Ltd.	A404
P. W. Insulations	B848
Refrigeration (Aberdeen) Ltd.	A420
Richards (Shipbuilders) Ltd.	A266
RNLI	B680E
James Robertson & Sons (Fleetwood) Ltd.	A428 & A426
Roundlands Ltd.	B692C
The Royal Bank of Scotland	B680
Ruston Diesels Ltd. Seab Division	A394 Outside Display
SAIT Electronics	A422
Salvus Bain (Management) Ltd	A115
I. T. Scott	B680B
Scottish Boatowners' Mutual Insurance Association	A402
Scottish Federation of Fishermen's Co-ops	B692H
Sea-Dog Life Saving Appliances (Scotland) Ltd.	B810
Seamen's Mission	B680A
Self-Changing Gears (c/o Alvis Ltd.	A111
Shortway Ropes & Guides Ltd.	B692F
Charles Siddon Ltd.	B640
Societe Grossol	A382
South Western Mechanised Fishing	B692A
Spark's of Aberdeen Ltd.	B628
Stork-Werkspoor Diesel B. V.	B660
Strathclyde Maritime & Industrial	B692K
Per S. Stromberg A/S	A410
J. & W. Stuart Ltd.	A416
Styropack (UK) Ltd.	A418
Tamar Boat Enterprises Ltd.	Outside Display
T. & H. Fire Extinguisher Co.	B638
Tillotsons Case Division	B814
Transatlantic Fishing Systems	B820
Trawl Equipment (Aberdeen)	A137
United Wire Ltd.	A434
Volvo-Penta	A398
Wagner Engineering Associates	B818
Weld Morgan Associates Ltd.	A129
Warwick Pump & Engineering	B844
Wesmar Sonar Marine Radio	B822
Whaway Watson Holdings Ltd.	B842
White Fish Authority	B712
Wilmar Engineering Co.	B714
"World Fishing"	B716
Woodsons of Aberdeen Ltd.	B718

Stand numbers subject to alteration

From: June 14 - 18

Venue: Queen's Links, Aberdeen

Daily opening: 10.00- 18.00 hours

Organisers: Eagle Exhibition Consultants

THE SHOW will be officially opened at 11 a.m. on Wednesday, June 14, by the Lord Lieutenant of Aberdeenshire, Maitland Mackie. Following his opening speech, the Lord Lieutenant will tour the stands at the exhibition which are to be housed in two pavilions. A firm supporter of fishing and agriculture, Maitland Mackie says that these industries must not be neglected for the sake of a temporary bonus from oil.

Sponsors: City of Aberdeen

Aberdeen Fish Producers' Organisation

Anglo-Scottish Fish Producers' Organisation

British Marine Equipment Council (Fisheries Division)

Herring Industry Board

Scottish Fishermen's Co-operatives

Scottish Fishermen's Organisation

Scottish White Fish Producers' Association

White Fish Authority

Your ticket to Catch '78

Preview of Catch '78

THE MOST powerful display of fishing hardware seen in Europe for a long time will be gathered on the Queen's Links at Aberdeen next week. A host of equipment from 16 countries will be unveiled when the Catch '78 fishing exhibition opens on Wednesday, June 14, for a five-day run.

The reputation of the "Catch" series of exhibitions has grown rapidly following its debut in Devon three years ago. Now, at Aberdeen, the series takes on the status of an international show. This has been brought about, not only by the equipment which comes from all areas of the world, but by the promise of visitors from New Zealand to Iceland.

The show — nearly twice the size of the last Scottish exhibition in the series at Aberdeen in 1976 — will cover some 100,000 sq. ft. and the organisers claim that "it will be the biggest fishing show in Europe", looks well founded.

A dominant presence at the show will be maintained by Norway with a national stand comprised of 11 companies, with equipment ranging from power blocks to fish boxes. The Danish Export Association will also be weighing in with a large display.

A number of exhibitors will be using the show to put equipment on public display for the first time. Among these will be Marconi with its multi-coloured electronics shop. This will feature the Japanese manufactured Koden Chromascope colour display echo sounders.

A big line-up of processing equipment at the show will be headed by a new machine from Germany developed for blue whiting. The Baader 121 is a combination heading, filleting and skinning machine. Worked by two operators, it can fillet blue whiting at a speed of 120 fish-a-minute. A pilot unit is now installed at the Rolf Olsen factory in Stornoway, Isle of Lewis.

Arenco of Sweden will also be introducing its CUS-80 machine for skinning white fish fillets. An important advantage claimed for this machine is that it uses a 'fixed' skinning knife.

The show will have plenty of power on tap with 35 suppliers of marine engines, auxiliaries and transmissions taking part. Nets, ropes, floats and a wide range of deck handling machinery will add up to a feast for fishermen.

Saturday and Sunday are expected to be the big days at the show, with most of the inshore fleet home for the weekend. Group visits have been arranged by fishing organisations in Devon, Cornwall and Grimsby.

The only thing missing this time at the show will be a fishing conference. This was going to be staged by the White Fish Authority, but has now been postponed.

Exhibitors are reported to be not too disappointed at this news — they believe it will give fishermen more time to buy!

In the following pages we take a look at some of the equipment to be displayed.

Colts Engineering. This firm based at Ryton, Tyne & Wear, manufactures a range of hydraulic deck machinery as successors to A. W. Smallwood. This covers windlasses, seine capstans, trawl winches up to 25-ton mid-layer pull and net drums.

On display will be a "6000" trawl winch, plus line and pot haulers. There will be pictures of other winches supplied recently, including four-ton split remote controlled winches for Newington Trawlers and a five-ton, four-drum winch for Brixham.

The firm has a standard range of twin-drum winches, from ¾ to four-ton mid-layer pull, and can supply winches to customer specifications up to 25 tonnes mid-layer pull.

European Marine & Machinery Agencies (Stand A208). This company will principally feature a Reintjes type WAL 400 ratio 4:1 gearbox with hydraulically operated clutch. Together with the Berg controllable pitch propeller type 440 D/3 and hydraulic unit type HM 204, this provides a neat space saving sterngear package for a 500 shp trawler.

There will be a cut-away model of the Reintjes type *BGA 200 gearbox showing* the principle operation of this gearbox design.

Also from Berg, a model SPf 0-5 bowthruster of 50hp capacity will be shown.

Hydraulically operated cranes from Marco Espana SA, the Spanish subsidiary of the well-known Seattle firm of marine equipment designers and manufacturers are featured for the first time, as well as model cranes from the Marco range.

Dorman Diesels Ltd. (Stand A117). This firm will show its 12JTM 384 shp (286 skW) marine propulsion unit at Catch '78.

The unit consists of a 12 cylinder 'Vee' form, turbocharged, water cooled, diesel engine, close coupled to a reverse/reduction gearbox.

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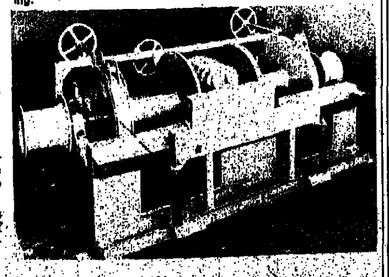
The 6000 model trawl winch due to be shown by Colts Engineering.



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UK AGENTS

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Mr T. Clinie, 25 Moor Rd, Eaglesham, Glasgow. Tel: 03553 3312

CATCH '78 PREVIEW

From page 11

Engine and gearbox are supported on individual mounting feet incorporating holding-down bolt holes and jacking screws.

The engine has a bore of 130 mm and a stroke of 125 mm giving a total swept volume of 19.9 litres, and is complete with 24 volt electric starting and charging systems and incorporates a sealed no loss fresh water cooling system.

Cummins Engine Co. Ltd. (Stand A306) will be launching a new marine engine at the exhibition.

The new unit is the NTA-855-M, a turbo-charged and after-cooled addition to the Shotts built 855 range. The NTA-855-M produces 325 bhp (242 kW) at 1800 rpm.

For marine use, the 14 litre 855 is now available in naturally aspirated form producing 196 bhp (145 kW) at 1800 rpm. There is a turbo-charged 275 bhp (205 kW) version and the new 320 bhp (239 kW) rating.

The NT-855-M which produces 275 bhp (205 kW) at 1800 rpm will also be on show. Rotational piston speeds of this model are low, 30 ft./sec., (9.1 m/sec.) comparable with medium speed engines.

The NTA-855-M is a compact, lightweight unit with a choice of PTO positions. At the front end a clutch or hydraulic PTO can be fitted.

The Cummins V-504-M engine has proved popular with fast inshore boats. With an output of 162 bhp (121 kW) at 2800 rpm the V-504-M has a very high power to weight ratio. It is a compact engine thus minimising instalation difficulties and giving the most capacity for payload.

The biggest Cummins engines are available in inline models. The K family of engines are available in inline six, Vee 12 and Vee 16 formations. The Vee 16 is the latest K model — announced at the Hanover Show in April.

The in line six cylinder KTA-1150-M and the Vee 12 KTA-2300-M will be at the exhibition.

The K series share the same 6.25 in. (159 mm) bore and stroke dimensions and have a 85 per cent parts interchangeability between the models in the range.

The KTA-1150-M produces 470 bhp (350 kW) at 1800 rpm.

In Vee 12 form the KTA-2300-M has a power rating of 940 bhp (701 kw) at 1800 rpm. Compared with medium speed units of similar output the KTA-2300-M is around three tons lighter, making for greater payload potential.

B&W Alpha Diesel AS participates on the Danish national stand. B&W Alpha Diesel engines, covering the horsepower range from 400 to about 5,000 bhp, were introduced into the British market in 1972.

The complete propulsion system consists of engine, reduction gearbox, propeller equipment, remote controls, and all necessary accessories to cover a complete propulsion package, all designed, produced, delivered, serviced and guaranteed by the same company.

As a new development, propulsion systems based on four-stroke, inline, diesel engines, ranging from 725 bhp to about 2,000 bhp have been introduced this year.

On show is a complete propulsion system, type 8V23L-VO, based on an eight-cylinder, vee-built, four-stroke diesel engine developing 1160 bhp at 800 rpm.

B&W Alpha Diesel AS is represented in UK by Ferguson & Timpson Ltd., Glasgow. Service agents are Northern Engineering Works, Peterhead, and H.N.P. Engineers, Lerwick, Shetland.

Anglo Belgian Co. will be highlighting its full range of marine propulsion engines.

Photographic displays will include the first UK public showing of the newly-developed DZ engine and ABC-powered trawlers under construction.

ABC engines are medium speed designs, the well established DX design, and the newly developed DZ which adopts a very high power-weight ratio concept of around twice the output of the DX from the same weight and size.

The DZ engine, presently available in six-cylinder form, develops 1800 h.p. at 1,000 rpm pressure-charged and inter-cooled as standard. DX engines are three, six and eight cylinders in-line, naturally aspirated or pressure charged with or without inter-cooling, covering an output of 185-1,200 hp.

Petter Marine Diesels is exhibiting a selection from its range of marine diesel engines and marine battery charging and generating equipment at the exhibition.

On display will be the air cooled 4.5 bkW (6 bhp) AC1Z, a water cooled 9 bkW (12 bhp) Mini-Twin, a 12.2 bkW (16.4 bhp) PH2 and a 33.6 bkW (45 bhp) PJ4 model, the largest in the Petter range.

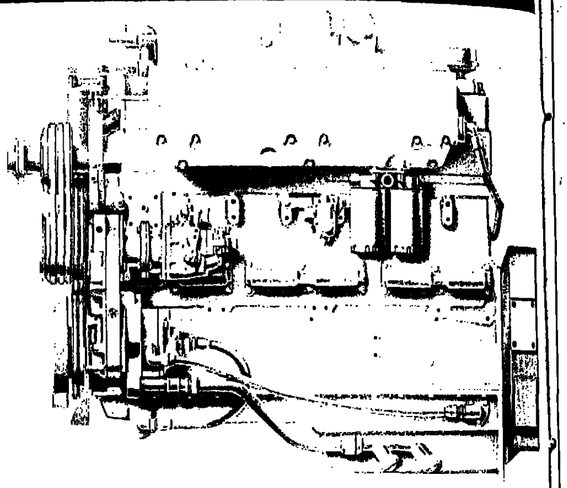
The AC1Z will be shown installed in a 24 ft. "Sandskipper" catamaran especially designed for surf fishing in developing countries.

Also exhibited will be a Petter Refrigeration Ltd. DFM transport refrigeration unit suitable for installation in insulated vehicles intended for the carriage of fresh or frozen fish.

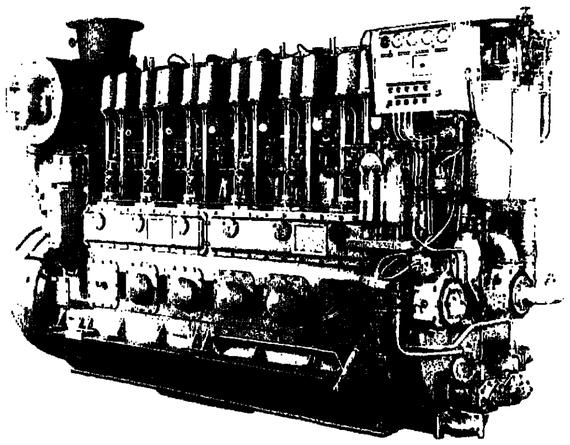
J. F. Duffield and Partners. This Norwich-based firm has recently been appointed UK concessionaires for Farymann marine diesel engines and are presenting a display of the model range at the exhibition.

With many years of experience in this field and having worked in close co-operation with professional fishermen and boatbuilders, Farymann have built a reputation for dependable service and reliability. The range of engines is particularly suited to small fishing and work boats — the money-conscious fisherman will appreciate the low running costs.

The range of engines are both water and air-cooled and are powered from 6.5 bp up to 27 hp. A choice of hand or electric starting is available and a range of optional equipment may be seen at the stand. In addition to a static display, a demonstration unit will be on hand and Duffield's sales staff will be pleased to demonstrate Farymann engines in simulated running conditions.

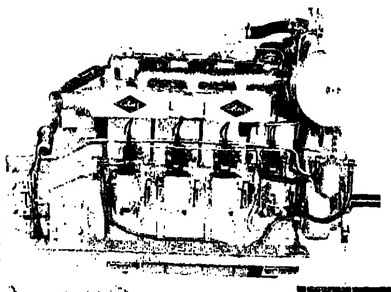


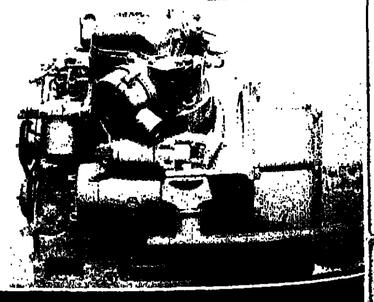
Right: Cummins, the American-based engine giant, is launching the 325 bhp NTA-855-M at Aberdeen. Pictured is the construction specification unit, which is similar to the marine unit.



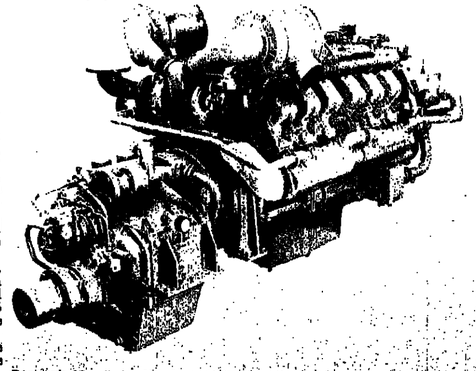
Left: details of ABC's DZ engine are available at Aberdeen for the first time. The 1,800 hp unit has in-line cylinders.

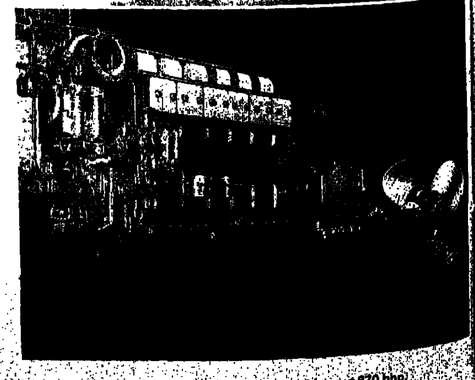
Below left: Petter's PJ4WM model is the largest marine diesel the firm is to display at Catch '78. This is a 45 bhp unit.





Below: the S30M, one of the range of Farymann diesels to be exhibited by J. F. Duffield and Partners of Norwich.





Dorman's 12-cylinder, Vee-form, 12JTM diesel develops 364 bhp. B. & W. Alpha's in-line six (type 6T23L-VO) is a four-stroke pushing out 870 bhp.

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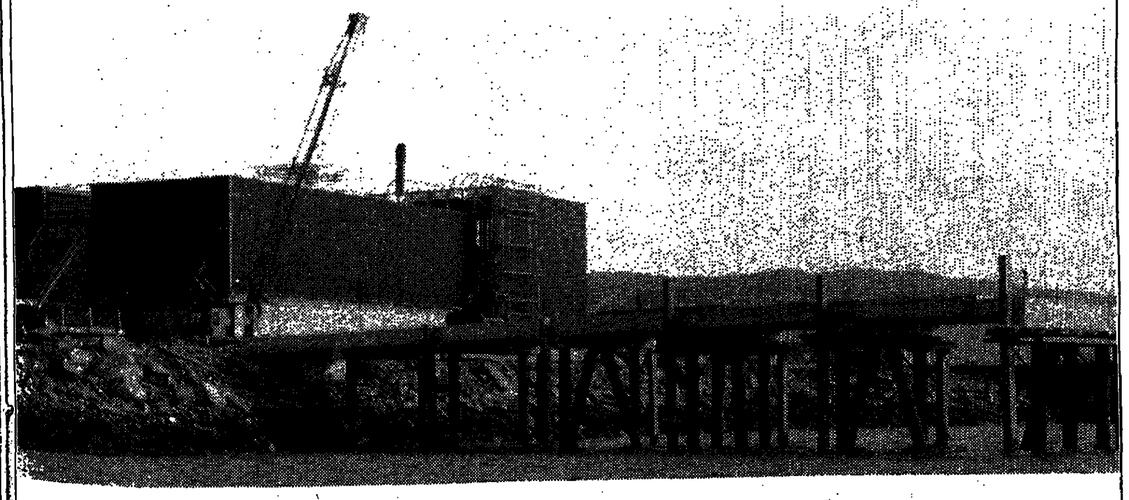

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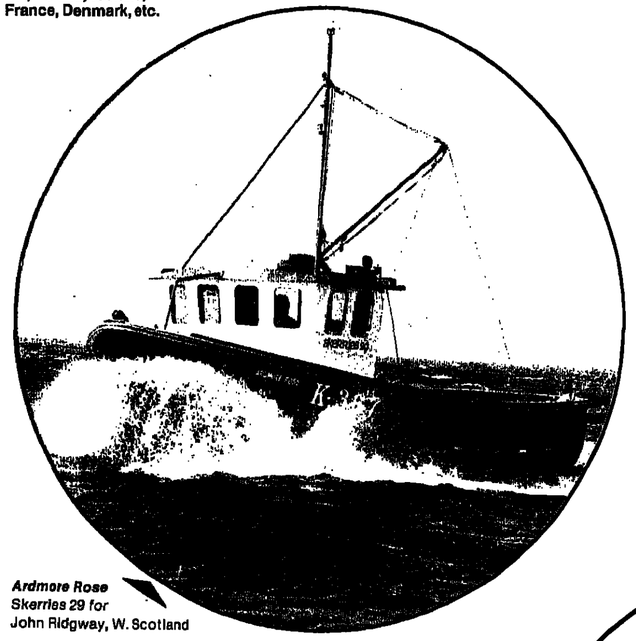
See us at CATCH'78 Aberdeen

STAND B836 and Display Area

Vessels in service in UK, Ireland, Iceland, France, Denmark, etc.



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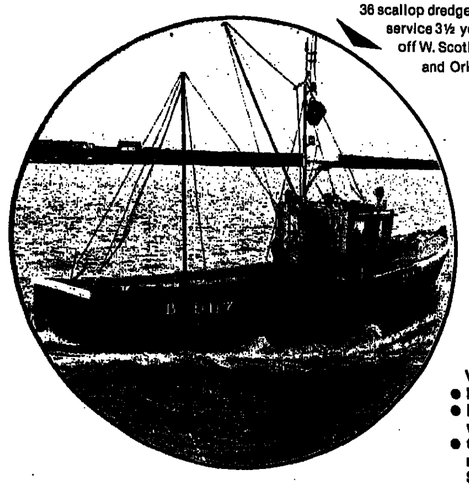
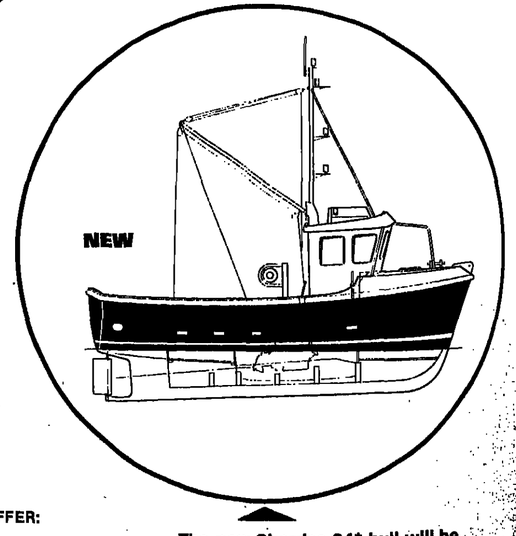
Skerries	24	29	36	54
Length o.a.	24'0"	28'9"	36'9"	54'2"
Beam	9'3"	12'0"	12'6"	18'0"
Draught	3'3"	4'0"	4'8"	8'0"
Displ. (Appr.)	4½ t	7½ t	12½ t	55 t
Speed (Appr.)	7½ kt	8½ kt	9 kt	10 kt

Curlew — a rugged Skerries 36 scallop dredger, in service 3½ years off W. Scotland and Orkney





The new Skerries 24* hull will be exhibited at Aberdeen. (The boat that's 'big for its size')

*Design: Murray, Cormack Associates.

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CATCH '78 PREVIEW

From page 12

C-Power (Marine) Ltd. A range of eight engines based on Ford and Leyland units from 33 bhp to 180 bhp and suitable for installation in craft up to 70 ft. C-Power markets its products direct to the UK boat builders and owners.

A complete range of direct crankshaft driven, clutched and hydraulic power take-offs, to suit most commercial applications is available.

Marine Laboratory, Department of Agriculture and Fisheries for Scotland. Blue whiting, gear research and the marine environment and oil are the three aspects of the lab's work on show.

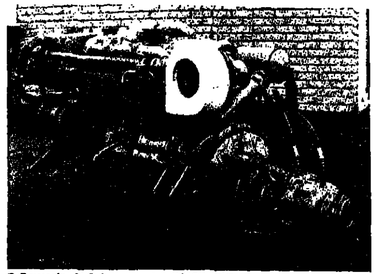
Blue whiting, which migrates to spawn west of Scotland in March-April each year, may be able to help fill some of the fish supplies gap when a number of technical problems have been solved. Marine Lab estimates indicate that the stock is several million tons and that an annual yield approaching one million tons could be sustained. This year's research is concentrated on the possibility of extending the fishing season around the UK.

Gear research: a four-panel trawl will be on display. Underwater cine and TV films will show different types of otter boards operating on smooth and hard grounds, the sand clouds they generate and the special features of the Marine Laboratory's four-panel trawl for white fish recently introduced.

Information on the four-panel trawl shown in the films and delagic gear for dual demersal/pelagic trawling will be illustrated.

Marine environment and oil: After *Torrey Canyon* and *Amoco Cadiz*, it is clear what massive oil spills can do to inshore marine life and fisheries. The exhibit shows the ways by which large amounts of oil reach the North Sea from air, land, rivers, shipping and the oil industry.

For various levels of oil pollution there could be corresponding effects on sea birds, plankton and fish; but who knows about the 'negligible' amounts so common everywhere nowadays. The lab shows diagrammatically how it is trying to find out.



C-Power's 162 bhp model 6/363TCIC diesel — one of eight engines the firm can supply.

Below: divers filming from an underwater observation vehicle. The results of their work will be seen on the Marine Laboratory stand.

HAVING A BALL!

A TRADITIONAL feature of the "Catch" exhibition is the Fishermen's Ball. This will be repeated this year at the Beach Ballroom in Aberdeen on Friday, June 16.

This 'let your hair down session' is in aid of the Royal National Mission to Deep Sea Fishermen. Besides the dancing and a slap-up supper, there will be a tombola stand and a big list of prizes.

***Tickets for the ball* are priced at £4.90 and can be obtained from: Mr. A. Corrigal, PO Box 101, Victoria Road, Torry, Aberdeen. Telephone: Aberdeen 877071.**

The Royal Bank of Scotland is the largest of the Scottish banks with over 500 branches, sub-branches and mobile services operating throughout Scotland, London and parts of the north of England.

Banking facilities are being provided by the Royal Bank on Stand B880 on each day of the exhibition except Sunday. Managers from various specialised departments are on hand to discuss all aspects of finance or offer advice to exhibition visitors.

Founded in 1727, the Royal Bank celebrated its 250th anniversary last year. In 1947, from the Stornoway Branch, the world's first mobile service was inaugurated. Around the Orkney Islands they operated the world's only Boat Bank (illustrated on the stand MV *Otterbank*), until this was replaced by a service utilising the local air service which was able to operate throughout the year irrespective of time and tides.

W. & J. Knox. On show will be a comprehensive range of products which embrace "Gourock" trawls, polythene and nylon trawl netting, gill *nets made from a variety of* materials, polypropylene and nylon crayfish nets, salmon and cod nets made from monofilament or nylon and, of special interest at present, polypropylene cod wreck nets.

For a number of years Knox has been supplying the acknowledged experts in this field of wreck fishing, the Danes. Now it is finding a growing interest in this country. It can supply either sheet nets or fully rigged nets.

Also on display will be fish farm cage netting, flotation units and a comprehensive range of fishing lines, twisted and braided netting twines.

The firm has now set-up a net repair service for purse seines at Kilbirnie, Ayrshire, and the firm eventually aims to supply fully-rigged nets. It has been supplying repair panels in this country and, also, exporting to leading Norwegian net-makers.

Ferguson & Timpson completed a major development programme involving its Thistlebond range of epoxide resin-based repair kits and products just over one year ago.

A re-written instruction manual, together with revised *kit contents, has provided* "a simple-to-use system for effecting repairs or providing re-inforcing, protective or 'armour' coatings by applying a glass fabric re-inforced epoxide resin laminate."

The standard Thistlebond epoxide resin system is supplied, pre-measured, in the correct quantities for mixing. The resultant resin mix is applied with a brush as the glass fabric re-inforced laminate repair is built up. Repairs, once the resin system has cured, have successfully withstood high pressures.

The "C" Kit has proved particularly popular in fishing boats both in the UK and overseas. There are three further sizes of standard Thistlebond repair kit to suit the requirements of different maintenance needs. Also, an extensive range of individual Thistlebond products and further specialised Thistle*bond kits all of which have* been developed to solve particular maintenance problems.

The Napier Co. (Arbroath) will exhibit plans, photographs, stability data, etc., on some of the vessels it has designed.

The firm reports business trebling in the past year. Established in 1969, it is now a leading British designer of fishing vessels, from small open boats to sophisticated pursers and stern trawlers in steel, wood, GRP and ferro cement. Clients come from all over Britain and Eire, while overseas business ranges from a design commissioned by Icelandic owners to a fishery training vessel being built in Indonesia.

Napier is known internationally for its involvement on the stability of inshore and offshore fishing vessels. Work includes stability calculations, advising on ways to improve the characteristics of existing vessels, etc., while the firm's extensive data and experience is useful on design work where stability is a major consideration.

The firm can provide a comprehensive service for builders or owners, including preliminary proposals, detailed plans, supervision of construction. With associates, it can offer package deals for fisheries developments overseas and advice on all aspects of fisheries, vessels and marketing.

S. M. Wills will be exhibiting in conjunction with *Messrs.* **Graham Ferrier & Co. Ltd.**

The steering gear exhibit will be a working power-assisted electric / hydraulic steering gear comprising a type T.160 swivelling hydraulic cylinder, complete with an electrically-driven *pumping unit assembly* controlled by a non-follow-up water-tight electric tiller switch; with a Triton (3) bridge unit.

Apart from giving power assistance, the pumping unit assembly solenoid control valve is suitable for being operated by most makes of automatic pilots.

This T.160 installation is capable of a rudder torque at the relief valve setting of 936 lbs.ft. (130 Kgm) at a hard over angle of 45° or 2021 lbs.ft. (280 Kgm) at 25° helm with a ram thrust of 2268 lbs.ft. (1029 Kgm) and requires 7½ turns of the bridge unit handwheel for full rudder movement, or approximately 12 seconds in power.

The bridge unit incorporates a locking valve which will hold the rudder at a given angle and prevent "kick-

Turn to page 18

MARINEX

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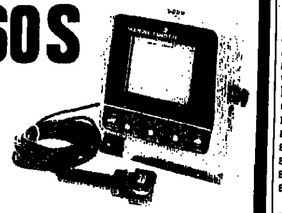

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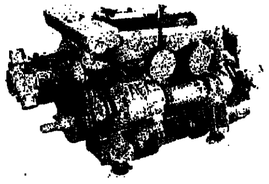

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CATCH '78 PREVIEW

From page 15

back" of the handwheel injuring the helmsman when external forces act on the rudder. This feature is also considerably advantageous when fishing where it is desired to hold the rudder partially over for long periods.

Like all "Wills-Ridley" swivelling cylinder steering systems, spherical bearings are fitted to the cylinder pivot and piston rod ends. These, together with the use of short lengths of flexible pipe, allow complete freedom of rudder movement and considerably assists in shipboard installations. They also permit slight rise and fall of rudder stock during service without any adverse effect.

Edward Macbean has been making foul-weather clothing since 1876. Part of its display at Catch '78 will be the well known Vinco 27 range of industrial fishing waterproofs made of heavy-duty PVC on cotton, and PVC on nylon.

All the garments have been specially treated to resist fish oils and animal fats, and all seams are electronically welded. The garments are supple and are designed not to split or crack even in low temperatures. Also on show for the first time will be a new range of thermal clothing. A selection of garments from the other Macbean ranges will be available for inspection.

DGR Merton Packaging will bring its Pachyderm non-returnable fish boxes to the show. Manufactured from a waterproof solid fibreboard; Pachyderm fish boxes are claimed to be unaffected by running water, ice, damp or freezing conditions. Used widely throughout the United Kingdom, they are easier to handle than wooden boxes as they avoid the problem of splinters and can be attractively colour printed.

A new development in fish boxes is the glued container made up on automatic glueing machinery which eliminates the need for metal staples.

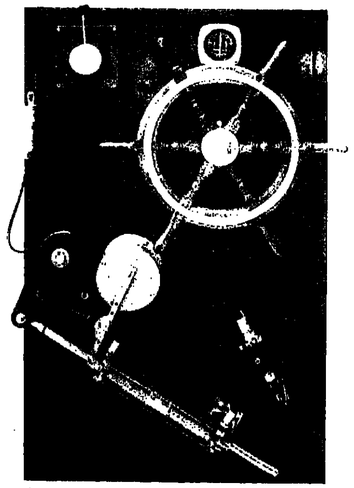
Also being displayed is the wedge-shaped Merstone Four non-returnable open-topped fish kit. This fibreboard box is designed to land and carry small fish from small ports to processors and merchants at the main centres. Advantages of this one-trip container against conventional wooden and plastic boxes include losses, repairs, cleaning, limited journeys and return transport charges. The Merstone Four can also be used for the bulk freezing of fish.

South Western Mechanised Fishing. The company specialises in hydraulic equipment and purpose-designed hydraulic systems and has equipped a large proportion of the south-west fleet, also many other vessels in other areas and abroad in the last four years.

The main exhibit is the new Celtic Slave 1,000 Kg. pot hauler developed from the successful Celtic Slave 1-ton and 1½-ton haulers. The new hauler features hardened stainless steel hauling sheaves and other improvements resulting from operational experience with over 40 installations.

Illustrated will be net drums up to 24 tons, a new 7½-ton multi-purpose net drum with clutched drum and warping capstan and heavy-duty clutched hydraulic pumps, etc. Agents are required for these products in Scotland.

Above: contents of a Thistlebond repair kit — just what's needed to keep you fishing. Below: hydraulic steering gear from S. M. Wills. The firm offers systems for many classes of boats.



Gordian Strapping Ltd. (Stand B500) will show a new semi-automatic polypropylene strapping machine, specially-designed for use in the commercial fishing industry. The new machine — Gordian OL35 Marine — has been launched after trials by Hull-based fishing organisations.

The machine features sealed electrics and alloy and stainless steel parts, making it ideal for use in wet conditions.

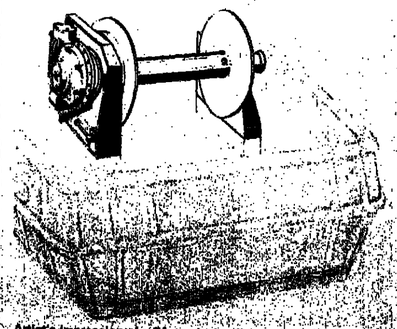
Two other machines will be demonstrated on Gordian's exhibit. One is the Gordian OLM, a fully-automatic side sealing machine. This is also made from stainless steel, for use with either wet or dry packages. The OLM is designed to resist abrasion and corrosion in troublesome environments.

The third machine on show, the Gordian OL7, an automatic machine with a wide range of arch sizes, is capable of handling cartons in a variety of shapes and dimensions.

The firm will also feature a wide selection of manual, pneumatic and electrically-operated strapping tools for use with steel, polypropylene and rayon strapping.

Materials on show will include Gordian and Agrion steel banding, Hyplex polypropylene strapping, Tytape and Tycord reinforcing materials, wire ties, staples and others.

In addition to strapping equipment and materials, the exhibit will feature the Gordian Spacefills, an inflatable, re-usable dunnage bag for protection of freight against journey hazards.



Artist's impression of a 7½-ton hydraulic net drum being offered by South Western Mechanised Fishing.

Inco-Ziegra (UK) Ltd. (Stands A202/204). Specialists in ice machines and ice systems, it will be showing various models from its range of automatic compact units.

The largest unit shown, model OBE 5000/A, produces five tons of ice per 24 hours and is delivered in a single cabinet ready to run. It requires only connection to water and electric supplies.

Apart from its compact design, this unit comprises two ice makers in one cabinet. They can be used singly or together according to demand.

Inco-Ziegra will also be showing a sample of ice storage bunkers.

Sea-Dog Life Saving Appliances (Scotland) Ltd. As stockists and suppliers of DoT approved safety equipment to yards, trawler owners, fishermen and fishermen's co-ops, Sea-Dog will be showing: life rafts, lifejackets, distress signals, fire fighting equipment, navigation lights, etc.

Self-Changing Gears Ltd. (Stand A111) is exhibiting three units from its range of hydraulically operated forward and reverse marine gearboxes.

All units are fitted with a guard device which, in the event of hydraulic failure, ensures the drive is locked in ahead position, so that the vessel can return to port.

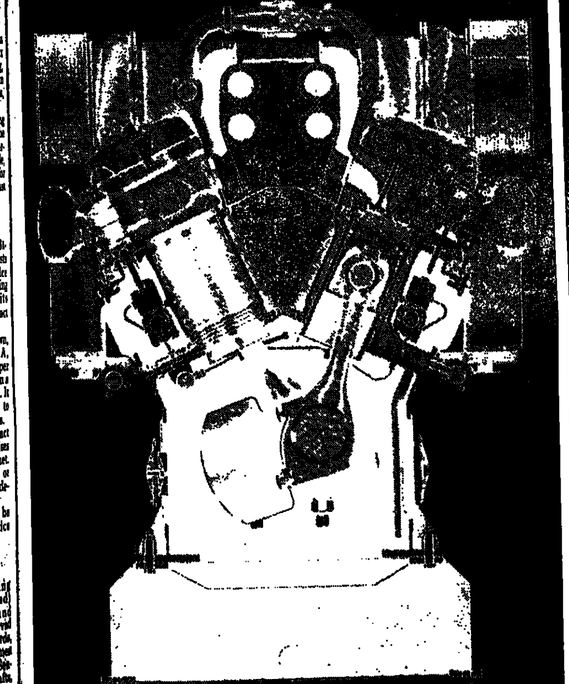
On display will be the MRF 350 Mark IIIA gearbox with a maximum rating of 400 lbs/ft. input torque and maximum input speed of 3600 rev/min and reduction ratios of 2 and 3:1.

The MRF 350 H.D. Mark IIIB, which is a heavy-duty gearbox developed from the 350 range with maximum input torque of 750 lbs/ft. and maximum input speed of 3800 rev/min with reduction ratios of 1.5, 2, 3, 4 and 4.46:1, will be on the stand.

Turn to page 18

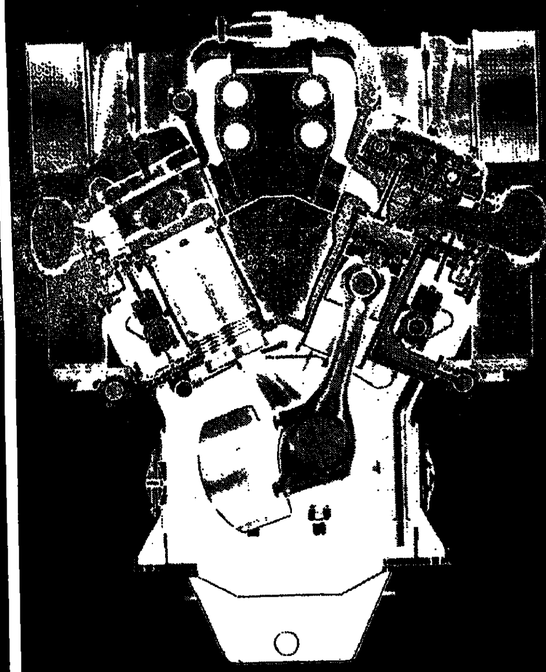
THE DIESEL TWINS

BERGEN DIESEL



Bergen Diesel Generating Sets serve aboard merchant vessels, offshore installations and power plants, and are supplied in a range 680 - 2.560 kW.

NORMO DIESEL



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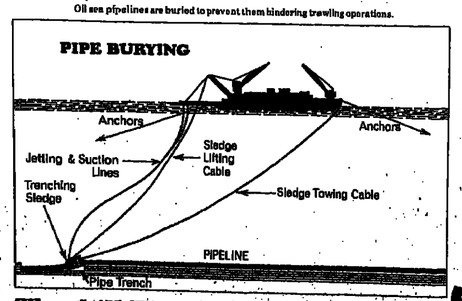
But Scotland's fishermen already face increasing problems and we in the oil industry are making sure we don't add to them.

To this task we have brought a vast amount of conservation experience and have consulted the fishing industry at every stage. Above all we have drawn on the unique experience of local fishermen.

One result of all this is that the pipelines from the oil fields will be buried under the seabed. And when we cross rivers and inland waters too, we are taking good care not to cause disturbance.

These are part of the wide range of oil industry conservation activities which cover many aspects of life in Scotland – its landscape, wildlife and traditional industries. All are designed to make sure that as we cast the net of progress more widely, we do nothing to hazard existing resources.

Oil sea pipelines are buried to prevent them hindering trawling operations.



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CATCH '78 PREVIEW

NORWAY ON PARADE

ONE OF the biggest national exhibits at the show will be mounted by Norway. Eleven companies will be housed on the now familiar trawler-shaped stand.

Hydraulik Brattvaag. Seine winches with pulls from 1.7 to 9 tons for Scottish seining and similar forms of fishing. Drum winches to haul the purse wire, and also winches for combined purse-seining/trawling operations, with capacities to customers' requirements.

For long-line and net hauling the company produces units with pulls of 1.2, 2.0 and 2.5 tons.

For trawling a wide range of winches is supplied plus the Synchro system, for automated fishing.

Finsam Industries Ltd. This manufacturer of refrigerated containers is highly specialised in the delivery of equipment for production, storing and handling of plate-ice, both for sea and land installation.

The labour-saving sea-borne ice plants, with the ice produced, stored and pneumatically transported directly into fish boxes, are now installed on almost 100 wet fish trawlers and purse-seiners operating in Northern Europe.

Finsam has delivered two plate-ice plants to Scotland, both with production capacity of 50 ton/24 h., this year. The first one was to the Fraserburgh Ice Company — a member of Association Cold Stores Limited. The second one — for the new harbour of Breasclete, Isle of Lewis — was a "container-plant," complete with pneumatic transport of ice, ordered by the Highlands and Islands Development Board.

Finsam also specialises in containerised ice plants.

West Norway Shipbuilders Association. Partly in co-operation with the association, some 53 yards have developed various designs for fishing vessels, from purse-seiners, long-liners and trawlers to large factory ships.

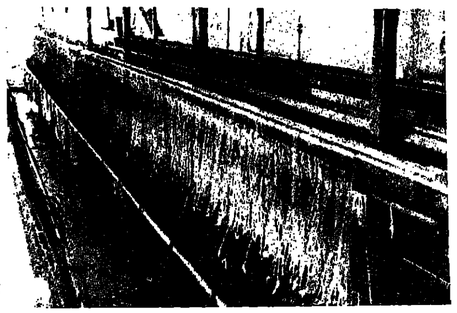
Member yards are seeking to specialise in particular types and sizes of vessels in order to achieve best possible results within their special fields.

Whilst the individual yards are usually fairly small, combined capacity is considerable, and the work-force numbers some 4,000. The sales office in Bergen employs 14 persons highly experienced in negotiating sales on behalf of member yards.

On behalf of customers abroad the association's sales office will secure quotations from suitable yards and also, if desired, provide drawings and specifications. The sales office will also advise on financing possibilities.

WNSA has delivered six fishing vessels to Ireland, nine to Scotland and four to the Shetlands of both wood and steel construction.

Norsenet. This firm has supplied British vessels with purse seines since 1968, when the first vessel, *Princess Anne*, was rigged with power block and came to Bergen to fetch her net, a purse seine of 280 by 70 fathoms.



Longlining looks like heading for a revival and Norway's Mustad Autoline system has already been demonstrated to Scottish fishermen. Magazines hold the clips (left) while an operator (right) baits using whole fish. Below: plate freezer from Kvaerner Kulde.

Since this time the size and number of purse seines have steadily increased — and in August 1974 the company delivered the largest purse seine so far to this market, a mackerel net of 350 by 100 fathoms for the Fraserburgh-registered *Chris Andra*.

Among the trawls produced are the Hoover and Octopus — an industrial fishing system which is used with success by fishermen in most countries bordering the North Sea.

In addition there is the Angla model — a versatile easy-to-tow midwater trawl which can be used for conventional midwater trawling for mackerel, herring or sprats or as a "one foot over the bottom" trawl after sandeel and pout. This trawl can also be rigged as a pair trawl.

Karmoy Mek. Verksted. Manufacturers all types and sizes of winches: split winches, purse-seine winches, trawl winches, end wire winches, cargo winches, boom swingers, topping winches, gilson winches, sweep winches, windlasses, net drums, capstans, net sounding winches and special combined winches.

Winches for fishing vessels can be delivered with pulls up to 50-tons, remote control, automatic spooling device, hydraulically operated band brakes and Auto-trawl system, all according to requirements.

Submersible pumps with capacities from 800 to 1,400 m3/hour mixed water and fish are also produced.

Located in West Norway, Karmøy Mek. Verksted is also a boatyard, specialising in building combined purse-seiners/trawlers from 80 to 180 ft. Latest delivery was the *Taits* to Fraserburgh.

In addition to new buildings, the yard undertakes lengthening, rebuilding, outfits and repair of ships and engines. There are three slipways up to 225 ft.

Yard and engineering works are situated by ice-free water close to the North Sea.

Skipsteknisk. Designs for all types of fishing vessels. These have been supplied including the largest purse seiner in Denmark, now under construction at the Alborg. The company also designed the Scottish purse seiner *Taits* which was recently delivered.

Other work includes white fish bottom/pelagic trawlers of 110-230 ft. and combined longliners / trawlers / gilnetters of 110-150 ft., as well as freezer / trawlers and purse seiners up to 200 feet.

Stromberg. A new plastic fish box specially designed for the UK will be featured.

It has the same dimensions as the present wooden six-stone box and can be stacked with the old one.

Special attention has been paid to the box's drainage and strength. Its smooth surface enables it to be cleaned easily.

Kvaerner Kulde. A complete range of products for fish refrigeration, from catch to consumer. These products include RSW systems and plate freezers.

The RSW systems have been developed over many years in co-operation with the owners and crews of the most efficient fishing vessels in the world. These are practical, reliable, and require little maintenance. To keep the systems clean — and easily cleanable — Kvaerner provides large RSW filters and special shell and tube coolers.

Kvaerner horizontal plate freezers feature freezing plates 32 mm thick, made as one-piece solid plates with drilled passages for the refrigerant.

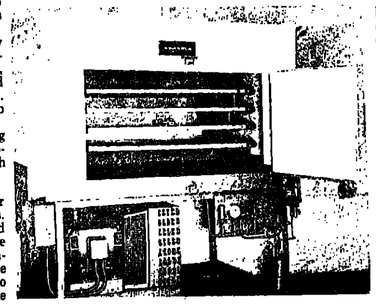
Mustad & Son. Fish hooks for all kinds of fishing.

A development that has aroused great interest internationally is the Mustad Autoline System, a complete system for mechanised long-line fishing. Autoline provides for all handling of the line — hauling, repair, storage, baiting and setting.

The Autoline System automatically cleans old bait and small fish off the hooks and arranges them in magazines ready for baiting. The crew carries out repairs while the lines are being hauled.

Baiting is carried out automatically while the line is being set. The machine baits efficiently at speeds from 1 to 10 knots. Line tubs are replaced by long magazines in which sets of lines are stored in complete lengths. Manual baiting and carrying of tubs are eliminated.

By installing the Mustad Autoline System it is claimed that crewing can be reduced by 2-3 men.



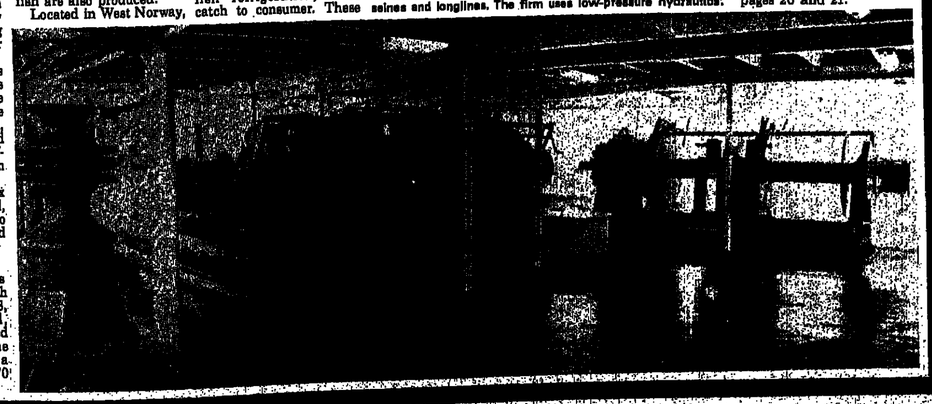
Bergens Mekaniske Verksted. Norwinch low pressure hydraulic deck machinery was introduced in 1946 and is now installed on more than 6,000 vessels.

The Norwinch hydraulic motor and power transmission control system was originally developed to meet the need for a flexible winch power transmission on board fishing vessels. Norwegian fishing vessels in particular are regularly operating in rough seas, and in these conditions an hydraulic power transmission with pressure relief valve control provides the protection necessary to prevent damage both to winch and net.

The Norwinch low pressure hydraulic power transmission equipment is built to withstand prolonged periods of fluctuating load and is designed to require the minimum of maintenance.

Hydraulic systems for braking and towing have been developed for trawling operations.

Simrad. One of the leading electronics manufacturers in the world in the fields of: echo sounders, sonars, trawl instrument systems and navigation equipment. See pages 20 and 21.



Norwinch produces hydraulic haulers for handling trawls, seines and longlines. The firm uses low-pressure hydraulics.

CATCH '78 PREVIEW

Electronics firms beam in

THE CATCH '78 show will be used by a number of electronics firms as a launch pad for new equipment.

It is significant that about one tenth of the exhibition space has been booked by electronics firms and organisations — a sign if one were needed of the ever-growing importance of all kinds of electronic aids to navigation and fishing.

This year's electronics turn-out promises to be so varied and interesting as to merit a look at each stand individually rather than a general description picking out the highlights of the show.

Krupp Atlas-Elektronik Aberdeen Division (Stand A442) will be presenting two completely new products: the 790 sonar for near and middle water boats and the big 700 series of fishfinding sounders with combined recorder and CRT presentation.

Other Krupp Atlas sounders on show will include the already well known 420, 460, and 611, while radar exhibits will include the 3200, 4100 and 5100 models. The Krupp Atlas display will also have a range of S.P. Radio mf, mf/hf, and vhf R/T's and the Cetrek autopilot.

Alexian Electronics (Stand B600) will have several working radar displays featuring the new Sperry Mk104, the same firm's Mk7 small craft set, and Electronic Laboratories' Seascan. Other exhibits here will include a selection of vhf sets such as the Electronic Laboratories' 61 channel Multi-Seavoice, S.P.Radio's RT144, and the new Mororola Modar range.

Sperry autopilots and gyroscopes will also be seen on the Alexian stand and two new types of fishing sounder, one British and the other American, are being shown here for the first time.

The American sounder is by Vexilar and the British sounder is a newcomer to the fishing scene, the Incastor.

Both are similar in principle in that the undersea information is presented on a cathode ray tube screen but, unlike the Fischlupe, is seen in the form of a black and white picture of what would appear on a paper recording. The picture can be 'frozen' at any time for a period of up to half an hour for close study.

British Brown Boveri Ltd. (Stand B774), though not displaying actual marine electronics hardware, will be offering its capability for carrying out service work on some of the electronic equipment used in the fishing industry, whether of its own manufacture or not.

For example, among the company's regular maintenance contracts is one for servicing the warp tension meters of *Grampian Monarch* and similar work can be undertaken on a number of other electronic as well as electrical or mechanical systems.

S. G. Brown Ltd. (Stand B804) is showing its well-known range of Arma-Brown gyro compasses and repeaters and the latest Ocean series of autopilots which can operate with either gyro or magnetic compasses. Also on display is the Magnavox MX1102 satellite navigation system — perhaps of more interest to the offshore industry than to the majority of fishermen.

Decca Navigator and Decca Radar (Stand A360) again share their usual large stand to display the products of both companies as well as those of Simrad of Norway and S.P. Radio of Denmark, and the Audix range of intercom units.

On the radar side there will be a working demonstration of the new clutter-clearing Clearscan technique in operation with a Group 9 radar display and the 060 and 110 radars.

Three types of autopilot will be seen, the DP460, the DP350, and for small boats the DP150 with the recently introduced modular steering gear system.

An interswitchable installation of the Mk 21 Navigator and DL91 Loran C receiver, with the 350T automatic track plotter, will be on the Decca stand which will also feature the ISIS integrated ship instrumentation system.

The display of Simrad equipment will cover the well-known range of sonars and the new CQ Sonarscope and CD Sonar data display; Simrad echo sounders, among them the new Skipper 701 for smaller vessels; net sounders and ancillary trawl observation equipment; and the PC vhf.

S.P. Radio's equipment on the Decca stand will cover a selection of mf, hf and vhf R/T's, and a typical Audix intercom installation will be mounted.

Electronic Laboratories Ltd. (Stand B544) is making a first direct appearance in Aberdeen in support of its various distributors which are including its products among their own displays.

Electronic Laboratories is putting its complete range on show for Catch '78 and although these instruments, nine in all, were mentioned in a special article in *Fishing News*, May 26, this did not deal with them in any detail.

The company now markets two radars, the 6 in. screen, 16-mile range Seascan, and the two-unit Seaveyor which has a maximum range of 36 miles and a display screen of 8½ in. dia.

Both versions of the Seavoice vhf will be on the stand; the original 12 channel version and the newer Multi-Seavoice RT660 61 channel set with dual watch as standard.

The two echo sounders shown will be the Seafarer 3 and the latest Seascribe II. The former has a clockface dial on which a light emitting diode has now replaced the flashing neon used in earlier models, and is calibrated for feet, fathoms or two scales of metres down to a certain 60 fathoms or 100 fathoms in favourable conditions.

Seascribe II is a dual function sounder with both the dial type presentation with LED flash and a chart recorder combined in one compact case. To complete the range, Electronic Laboratories will display the Seafarer electro-magnetic speed log with nautical mile counter, the Seacourse autopilot for tiller-steered boats, and the Seafix hand-held direction-finder.

Export Council of Norway (Stands B670 and 770) is mounting a joint venture representing 11 companies. Among these will be Simrad which apart from having its products on the Decca stand, will be staging its own separate display of sounders, Omega, Loran C and satellite navigation receivers, and of course sonars.

Among these will be a new type being introduced at the Aberdeen show, the SY automatic sonar designed for small and medium-sized boats. This has a cathode ray tube display and a working frequency of 80 kHz with 1 kW power output and provides eight ranges from ¾ to 1,500 metres.

Kelvin Hughes (Stand B760) is mounting a special display of its new Series A radars, all of which use the same 25 kW solid-state transceiver based on a special design developed for the Royal Navy.

Display units available are a 9 in., two 12 inch (one of which is compass stabilised), two 16 in. sets (one compass-stabilised relative and the other true motion). The unique Situation Display which will be seen working with the new 'two-tone' clutter discersal technique clears clutter without losing echoes from targets in the clutter area.

NECO Communications Ltd. (Stand B776) has a new Dancom vhf, the RT408, to show visitors. This is a 88 channel synthesised set with dual watch as standard and Selcall and full duplex facilities available as extras.

The full range of Dancom communications units will be on this stand including the RX409 vhf Selcall receiver, 200 and 400 watt hf R/T's, the HP1200 ssb transmitter which can be programmed for up to 480 preset frequencies, and receivers such as the mf/hf R201 and R203 and the 7 channel RX601.

The WG fishing sounder and net telemetry system will be included on the Kelvin Hughes stand as will the MS48 sounder and the Minch 2182 kHz watchkeeping receiver.

Other communications equipment shown will include the Danish Skanti TRP2000 and TRP4000 ssb R/T's, 200W and 400W respectively, with 30 transmit and receive channels in the frequency band 1.6 to 4 MHz plus the 4 MHz hf band. The Skanti R5001 general purpose synthesised ssb receiver will also be on display.

Woodsons of Aberdeen Ltd. (Beside Buchan Pavilion) has its fully-equipped demonstration vehicle among the outside exhibits and again there will be new products to be seen for the first time.

Woodsons are agents in Scotland for the Oki Company of Japan and will have a working display of the brand new Oki ONX7 solid-state 48-mile radar, the first of which has been put in the new well-known Inverness Boat *Ajax*. A similar installation has been put in the new *Sunbeam* just completed by Richard Irvin & Sons at Peterhead. Skipper is Sutherland's new 86ft. *Keshen* from Campbeltown Shipyards and the new *Lunar Bow* building in Norway for the Buchan family, also feature this equipment.

The 24-mile range ONX5 Seagle II radar will also be in the vehicle which will contain another new fishing aid, the Elac small Mini-Lodar sonar. This is a combined CRT and chart recorder instrument giving a 360 degree sweep over a range of 1,600 metres. Ideal, according to Woodsons, for mackerel fishing.

The first new Mini-Lodar is being fitted on the *Heritage* building in Holland for a Banff skipper, while *Lunar Bow* will also have one, in addition to her new ONX7 radar.

Other Elac equipment in the Woodsons vehicle will include the larger Mittel-Lodar with its 2,400 metre range, the LAZ44 Lodarscope CRT, LAZ72 recorder with LAZ62 Fishlupe, and the new DSG8 bottom expansion unit, plus two other recording sounders, the LAZ100 and LAZ72.

There will also be a selection of S.P. Radio's mf, hf and vhf R/T's and two Robertson autopilots, the AP-7 and AP-30, in addition to Woodsons' own range of intercom equipment.

Wesmar Sonar Marine Radio (Stand B522) is yet another company using the show to parade two new products.

One of these will be a dual frequency fishing sounder, the R400, which can be switched over to transmit on either 15 or 200 kHz as the user wishes, and the other new item is another autopilot from Robertson A/S of Norway which employs a saturable core solid state compass with no moving parts and does not even have a rotating compass card.

Sonars, of course, will be well featured by Wesmar with special emphasis on the lower frequency SS230 which with its 1,500 metre search range proved so successful at last year's Catch '77 show on Humberside.

The 1,000 metre range SS220 will also be on view as well as its inexpensive version, the SS160, which Wesmar's Del Clarke believes will be of special interest to prawn trawler skippers.

Post Office Telecommunications (Stand B790) may not actually be purveying electronic hardware to fishermen, but it is certainly doing a hard-sell job on its Maritime Radio Services.

This year, as well as continuing its campaign for submarine cable protection, its stand will have working demonstrations of the different methods of communication between ship and shore. Calls will be made to vessels in distant as well as coastal waters, and radiotelex messages connected through Post Office coast stations to North Sea offshore platforms and ocean-going ships.

Visitors to the stand will have the opportunity of talking by R/T to fishing vessels at sea.

SAIT London (Stand A422) is another firm which will be using the show to introduce new products.

One of these is its smallest mf and hf ssb R/T, the Europa One, with 30 transmit and receive channels in the band 1.6 to 18 MHz and an output power of 180W.

Another new item is the Arctos 58 channel vhf with dual watch and full duplex facilities. Both these sets have been MPT type-approved and are suitable for use with Selcall.

Another vhf to be shown by SAIT is the Norwegian Robertson Type 100 which, although not making its first appearance here, is still of fairly recent birth. This too may be fitted with Selcall and since it can be operated from either 12 or 24 volts dc is suitable for inshore or near water boats.

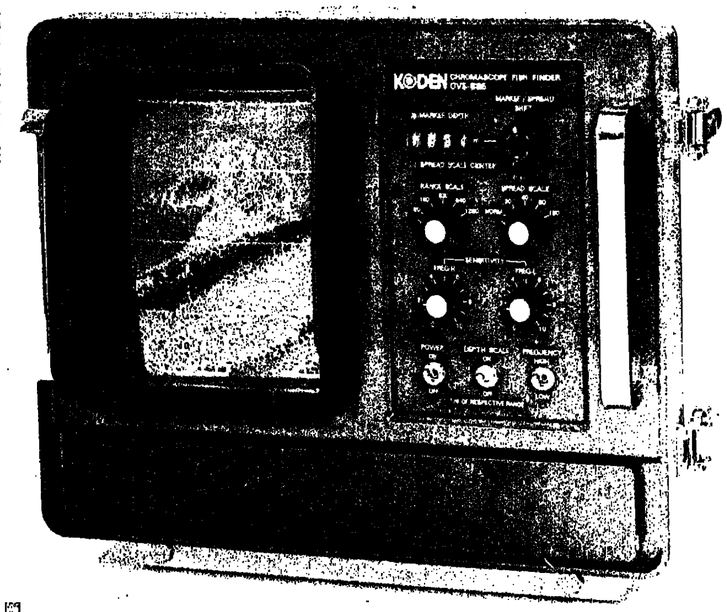
Among the bigger communications sets to be seen are the ER210 and ER410 mf radio telephones, outputs 200 and 400W respectively, and the ER4250 which can be used for radiotelephony, telegraphy, or telex. The 400W transmitter can be programmed for up to 256 channels and the receiver tunes from 10 kHz to 30 MHz.

There will also be a working display of the X511oA radio-telex system with error correction, operating with its latest general purpose marine receiver, the MR1450l.

Items from the Danish Skanti range of R/T sets are on view, and navigational aids will include the new SKR80 electronic gyro compass by Robertson A/S, being shown for the first time in Aberdeen, and the Norwegian firm's AP-7 and AP-30 autopilots.

Another piece of equipment being shown for the first time is the Oki ONX10 10kW solid state radar which will be accompanied by the longer-established 20 kW ONX20 set.

Position fixing systems such as Loran C, satellite navigation, and automatic Omega receivers will be on the SAIT stand whose display will be completed by a range of rudder angle indicators and the ISS 47V fire detection system by Securitas of Copenhagen.



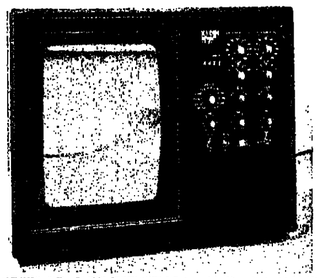
TV screen presentation — and TV screen colour. Marconi's Chromascope K5 (above) and K3 (below) will be seen in operation using video techniques.

Colour sounders' first showing

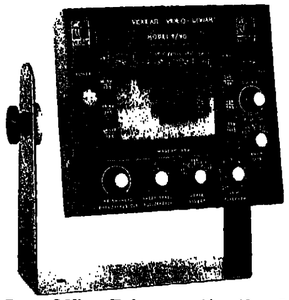
A SPECIAL feature of Marconi Marine's stand (number B704) will be the new range of Chromascope K fishing sounders which present subsurface information in colour on a TV-type screen. These are now available in three versions, known as the Chromascope K1, K3 and K5, the last name being the smallest with its receiver incorporated in the compact display case.

The Chromascope K1 will be seen working using video recordings taken from the installation on the Boyd Line's *Arctic Raider*. More conventional sounders will include the Graphette K and new improved versions of the Fishgraph K and the NM850AT net-monitor in which micro-processors and integrated circuits are now used instead of the former transistors.

A full range of equipment for long, medium and short range communications, safety, watchkeeping and survival craft operation will be seen on the Marconi stand.



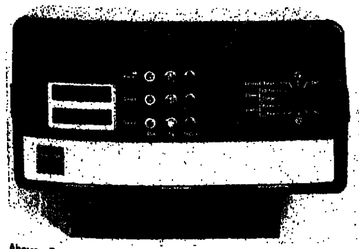
CATCH '78 PREVIEW

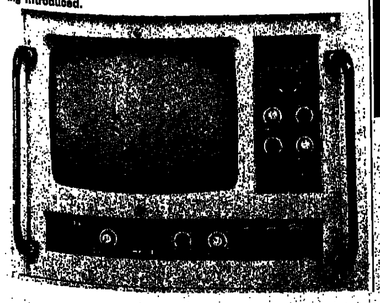


Left: among new units being shown at Catch '78 for the first time will be this Vexilar video-sonar on the stand of Alexian Electronics.

Above: the Arctos 58-channel vhf, MPT type-approved, is a first timer on the SAIT stand.

Right: new SKR80 all-electronic gyro compass from Robertson A/S of Norway to be on the SAIT stand.





Above: Decca will be showing its DL91 Loran C receiver at Catch '78. Below: Simrad's new automatic sonar Type SY is being introduced.

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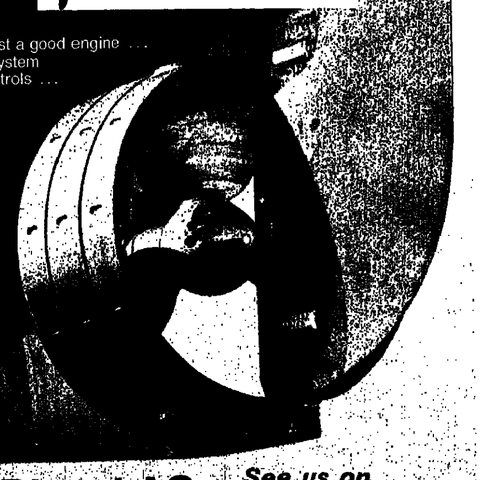

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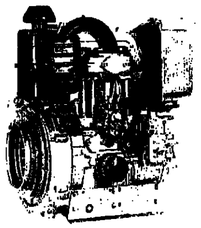

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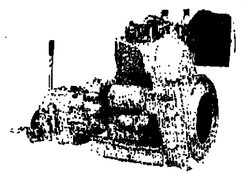

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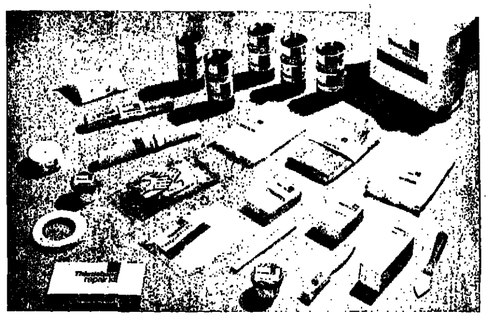

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IT'S ALL HAPPENING AT PETERHEAD

Some of the 400 boats regularly landing at Peterhead.

THE LAST three months have seen tremendous activity in Peterhead and it is now the port where everything's happening. But there is a cloud on the horizon — falling catches.

The number of boats using the fish market this year looks like exceeding the 1977 figure of 400 as even more Scottish vessels keep switching to Peterhead from other ports.

The numbers have also been swelled by at least half-a-dozen new vessels — and the boats which they replace remain on service with the local fleet.

At least two Grimsby boats are planning to make Peterhead their base and, during the last few weeks, some 30 or more Danish vessels have been landing white fish and shrimps there.

May 6 saw the heaviest landing of the year when a huge fleet of 68 vessels put ashore 11,073 boxes of white fish. Pressure on market space was so severe that several catches were held back for second sales. A further 34 boats landed 6,090 boxes the following morning.

The market, with a frontage of 1,000 ft., can accommodate about 45 vessels for the first sale and its floor area of just short of 5,000 sq. yd. can hold 7,000 boxes laid out in single tiers.

Although part of the market came into use only a couple of years ago, it is now no longer able to take these huge landings and so the Harbour Trustees have invited tenders for the construction of a further 200 ft. of market which will be able to hold another 2,000 boxes.

This will be a two-storey building, unlike the remainder of the fish market structure, and the upper floor will house offices.

Left: Peterhead's 1,000ft. long market can hold 7,000 boxes in single tiers — but space for another 2,000 boxes is urgently needed.

There is no doubt a terrific amount of fish coming into Peterhead, but things are not as buoyant as they seem.

Landings of white fish during the first four months of this year amounted to 363,788 cwt. and showed a slight decrease when compared with the 415,512 cwt. put ashore during the same period last year.

Individual vessels are catching less than they have done in recent years.

Skipper Ian Sutherland of Hopeman, whose 80ft. vessel *Kestrel* was the highest earning Scottish seiner in 1976, told *Fishing News* that there has been a marked scarcity of fish this year on the Bergen Bank. This is an important fishing area for the Scottish fleet.

He said that an average weekly catch for a larger seiner is now about 250 boxes, whereas three years ago it was double that.

Another leading seine net skipper, Peter Strachan of the 85 ft. *Sunhope III*, said that catches have been so low on the Bergen Bank this spring that a number of boats switched to other grounds.

He said that this year is the first time that he had fished other than on the Bergen, although he had now returned there as catches seemed to be improving a little.

Chairman of Peterhead Harbour Trustees, John D. Buchan, is particularly concerned about the political situation.

"Without a shadow of a doubt", he said, "there is a lack of adequate measures to *conserve fish*.

"Loss of distant water grounds has forced the big trawlers into the areas worked by the Scottish inshore fleet and there are quite definite signs of overfishing.

"Unless we get adequate conservation measures the North Sea will soon be as empty of white fish as it is of herring.

"The fishermen are beginning to despair that the EEC's Common Fisheries Policy will every be resolved, or that our own Government will ever do anything."

Some fishermen are not quite so despondent, however. They put forward the view that fishing has always been a pattern of lean years followed by good years and that there have been even greater scarcities in the past.

One seine net skipper said that the abnormally cold weather this spring may well be a reason for the scarcity, as there would be a shortage of feeding stuffs for the fish. He said that things could well be better when the warmer weather comes.

By early June it is also expected that the Ling Bank fishing will have started and the fleet will be less concentrated. So, the pressure will be off the Bergen Bank.

About half the 300 or so Scottish seiners and pair trawlers working the Bergen in April and May could well have moved on to the Ling Bank by early June.

One issue which the local industry does now agree on, however, is that industrial fishing must be stopped.

Skipper Innes McPherson of the 86 ft. vessel *Supreme* said: "Industrial fishing is just not on. It is not fair to the small fish and should be cut out altogether."

Pair trawlers set the pace

PETERHEAD

PAIR TRAWLERS regularly out-fished the seine netters this year and several partnerships have landed total catches of 1,000 boxes and more.

They are able to work on the rougher ground where fish has been more plentiful — and they can also catch a greater percentage of the higher-swimming fish such as cod and coley.

In previous years pair trawling for white fish has been mainly adopted as a between-season activity by the herring and sprat trawlers. It saved skippers the extra expense of seine net gear.

But, in recent months, some of these vessels have spent much more time on white fish trawling and now even a number of top seine net skippers are turning to this method.

Early in May two leading Peterhead-based seine net specialists, skippers Alec Jack and Innes McPherson, began pair trawling with their 86 ft. boats *Acacia Wood* and *Supreme*.

More seiners are gearing up to switch to pair trawling should catches from the seine net grounds remain poor.

Among Peterhead vessels which have ordered pair trawling gear are the 80 ft. *Favonius*, the 85 ft. *Stanhope III*, the 100 ft. *Loch Kildonan* and the new 85 ft. *Challenger II*.

The skippers of all these boats have mainly concentrated on seine netting in recent years.

Pair trawls have also been ordered for the two new vessels *Kestrel* and *Sunbeam*, just completed for skippers Ian Sutherland of Hopeman and William Smith of Lossiemouth.

Both skippers have regularly been among the highest earning seine net fishermen in Scotland with their previous vessels (also named *Kestrel* and *Sunbeam*).

The new 85 ft. long overall *Kestrel* has been built by the Campbeltown Shipyard. The 86 ft. wooden-hulled *Sunbeam* was delivered in May by the Richard Irvin yard in Peterhead (story and pictures of *Sunbeam* in next week's issue).

Skipper Sutherland told *Fishing News* that the two boats will work the seine net for a month or two, but will then try the pair trawl together if necessary.

He said that, although fish is more plentiful on the hard ground in the spring, the situation could alter within the next few weeks. The seine netters may well start to pick up again when the fish settle on to the cleaner bottom.

Skipper Innes McPherson of *Supreme* said that pair trawling seems to be a more economical method of fishing, as the trawls last longer than seine nets.

Pair trawling for white fish has been steadily growing in popularity among the Peterhead-based fleet during the last three years.

One or two partnerships tried it for a short while six or seven years ago, but it did not really get going until 1976. Then, four pairs worked for a few weeks in the late spring and through the summer.

One pair — the 86 ft. sister-ships *Morning Dawn* and *Unity* — carried on until late that year before moving south to the North Shields sprat fishery.

Last year six local partnerships worked the pair trawl, including:

Morning Dawn and *Unity* (skippers David Morgan and John McLean).

Faithful II and *Upriside II* (skippers Walter Milne and Arthur Buchan).

Constant Friend and *Starlight* (skippers Bruce Thain and Alec Baird).

Fairweather V and *Sparkling Star* (skippers John Alec Buchan and John Buchan).

Seringa and *Sundari* (skippers John and William Morgan).

Shemara and *Starcrest* (skippers Jim Pirie and George Collin).

Popular fishing grounds included Muckle Flugga, to the north of the Shetlands, the Bergen Bank and the Fair Isle.

Results are satisfactory even though the majority of boats are still experimenting with methods of rigging and

Turn to page 27

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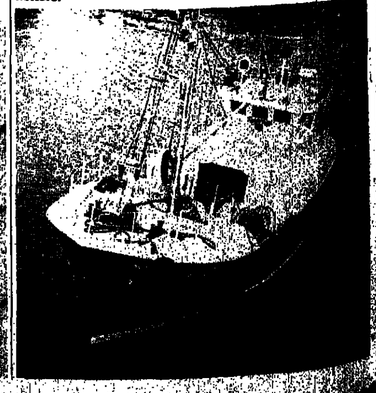
Unity (above) is one of the pair-trawlers which has out-grossed the seiners this spring. This 86-footer works with *Morning Dawn*.

Supreme (above) and *Acacia Wood* (below) are sister-ships working as a pair. The 86-footers formerly worked as seine netters.



SAIT AT "CATCH 78"

SAIT was established in 1901 and has, therefore, been marketing and servicing ships' radio equipment since marine electronics came into existance. It is now one of the largest marine electronics companies in the world, however, until fairly recently SAIT have been almost unknown to many of the United Kingdom's Fishing Fleets. At "CATCH '78" the company will be presenting a complete package to the shipowner, not only in sales, but also service, through one of the company's 400 worldwide depots or one of its many agencies.

TRANSCEIVERS

This year SAIT have no fewer than seven different radio transceivers. The (1) ER210 (200 watts) and the (2) ER410 (400 watts) radio telephone transceivers comprising of up to 30 transmit and receive channels together with a continuous tuning SSB receiver. The (3) ER4250 (400 watts) SSB transceiver is fitted with up to 266 transmit channels covering 1.6 to 30Mhz. The receiver has a frequency spectrum of 10Khz to 30Mhz, frequencies being selected by either keyboard or continuous tuning control. Modes of operation A3H/A3A/A3J (radio telephony) A1 (Morse telegraphy) and F1 Telex.

(4) *Europa One*, compact 180 watt radio telephone with up to independently 36 transmit and receive frequencies in the MF and HF marine bands (1.6Mhz—18Mhz). This unit is fitted with an automatic tuning unit and coupler. All these transceivers are fitted with the 2182 Khz two tone alarm.

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(6) Arctos VHF DSB, Simplex full duplex fitted with 88 channels including five private and dual watch.

(7) Marinetta IV Emergency Trans Receiver for Survival Craft, designed for transmission and reception of three international maritime distress or emergency frequencies 500, 2182 and 8364 Khz. The Marinetta IV provides two way radio communication by telegraphy or telephony from a lifeboat or a liferaft.

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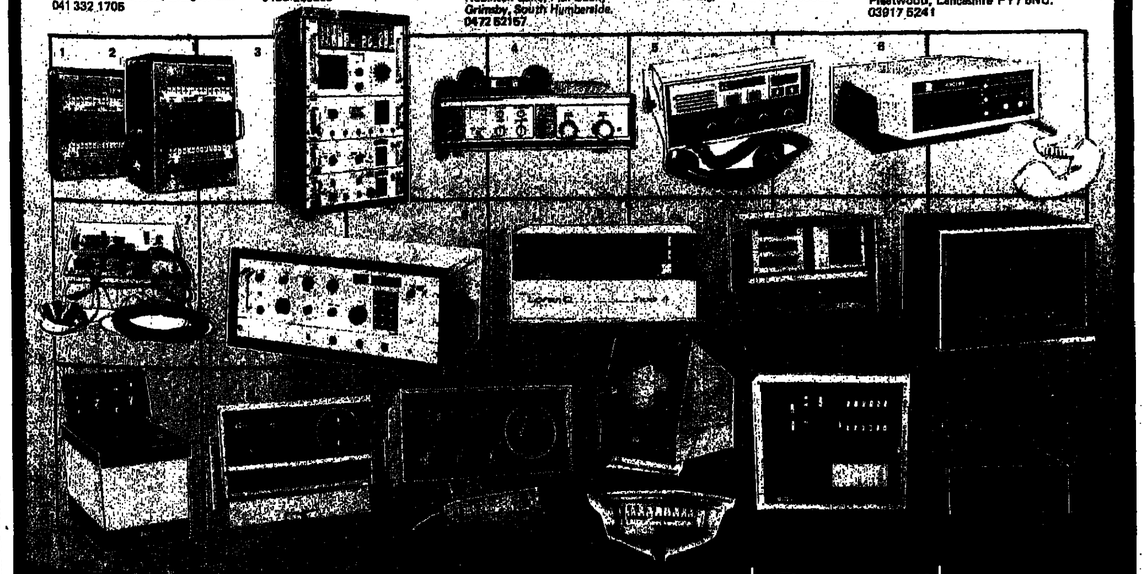

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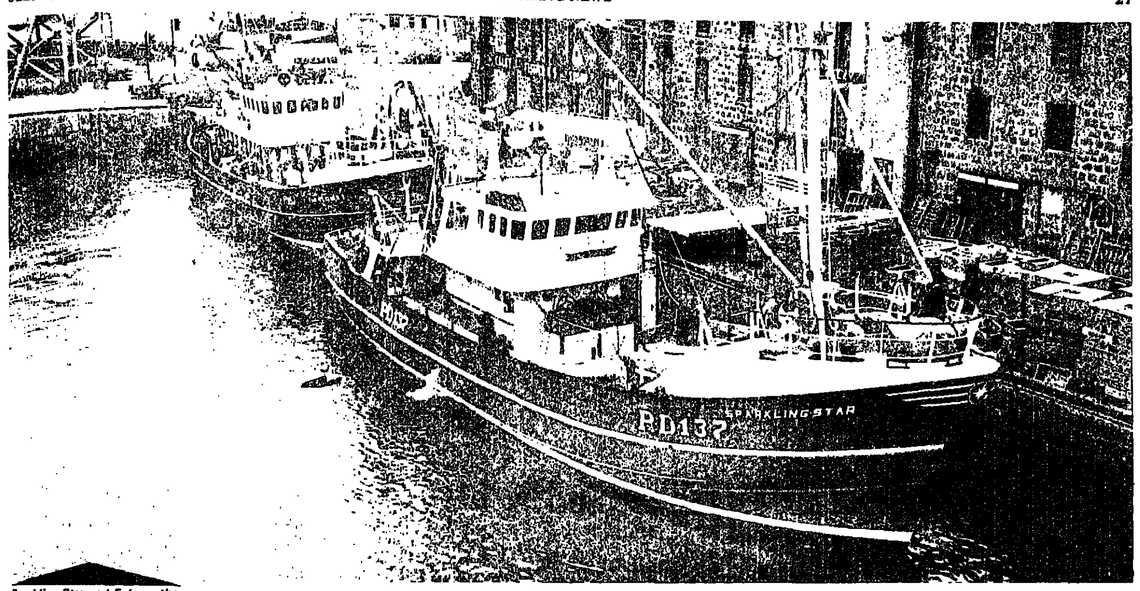


Sparkling Star and *Fairweather V* started working as pair trawlers together in 1976. Their skippers, John Buchan and John Alec Buchan, have now built up a lot of experience.

From page 24

working the gear on the new fishing grounds.

By the middle of the year coley was earning twice what it was 12 months ago and so catches are now much more worthwhile.

One pair, *Morning Dawn* and *Unity*, continued white fish pair trawling throughout last winter to considerable effect. They landed catches of 1,000 boxes and more between them.

Quite early in the spring, *Shemara* came back from the North Shields sprat fishery and began to pair trawl in partnership with another Peterhead vessel, the 86 ft. *Golden Dawn* (Skipper Andrew Cowe). One of their early trips resulted in 1,233 boxes, which included 675 of cod.

Landings at Peterhead by white fish pair trawlers during the first four months of the year amounted to 17,849 cwt. worth £424,173. These figures are far ahead of the 5,197 cwt. valued at £122,588 put ashore during the same period in 1977.

By early May more partnerships had got going. Included were the former Fleetwood 86-footers *Lorenzo* and *Benvolio* which fish under their new skippers, Arthur Buchan and Peter Ritchie. (See page 63).

West coast

Sparkling Star and *Fairweather V* began the fishing after coming home from the west coast herring fishery (*Fairweather* was fitted with a new net drum specially designed for handling white fish trawls. See right).

Faithful II came home from North Shields and has teamed up with a Fraserburgh vessel, the 86 ft. *Green Pastures* (Skipper George Ritchie), while *Acacia Wood* and *Supreme* took aboard their pair trawls early in May.

It is thought that at least 12 local partnerships, together with several more from other ports, could be pair trawling for white fish from Peterhead by mid-summer.

Winches and net drums for pairing

A PETERHEAD engineering firm is developing a sturdy range of net drums and winches to meet the heavy demands of the white fish pair trawlers.

Tecnor Engineering has introduced a net drum and the first has gone aboard the 85ft. Peterhead vessel *Fairweather V* (Skipper John Alec Buchan). Others are being made for two more local boats.

Personnel from Tecnor have spent a lot of time talking to the pair trawler skippers and have designed the drum to their requirements.

Fishermen asked for simple and robust equipment with large net capacity and good pulling power.

The Tecnor drum is of particularly heavy construction and incorporates a gear drive on to a hydraulic motor which gives a pull of 15 tons.

A new range of winches suitable for white fish pair trawling is now on Tecnor's drawing board and these incorporate larger capacity warp drums plus the powerful line pulls fishermen specified.

Tecnor was set-up about one year ago when new management took over the Peterhead firm of A. F. Engineering (Scotland) Ltd.

Operating under managing director Dr. Bill Thain, and technical director Alec Keith, the new company is developing and making a range of hydraulic deck equipment and offers full service facilities.

The factory is ideally situated in Peterhead. Fishermen can walk in straight from the harbour.

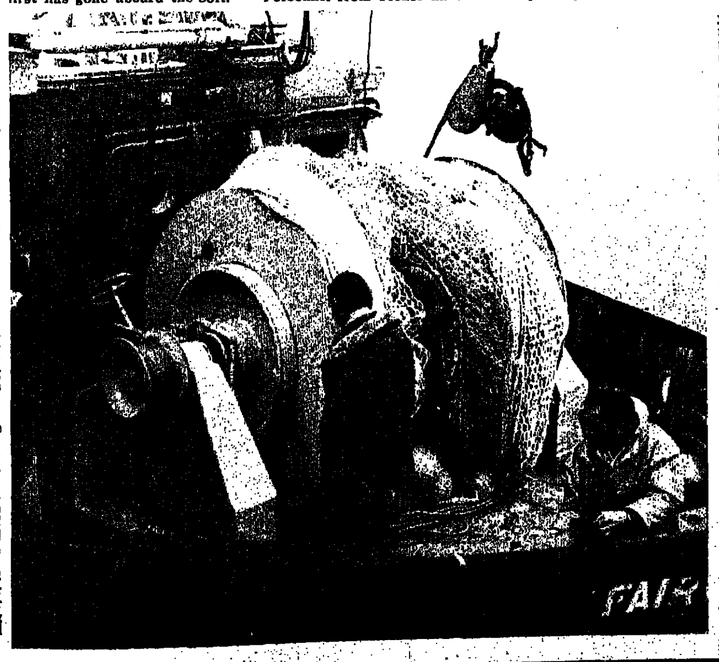
The firm also offers comprehensive engineering and metal fabrication facilities and, earlier this year, carried out a major modification to the former Peterhead vessel *Aquarius*.

This 78ft. transom-sterned and wooden-hulled boat was built by J. and G. Forbes and Co. in 1970 for Skipper 'Jim' Slater. He now fishes with the 140ft. purse seiner *Sette Mari*.

Skipper Slater sold *Aquarius* to Skipper John Stewart of Elgin, who renamed her *Dauntless* and has had her equipped for seine netting.

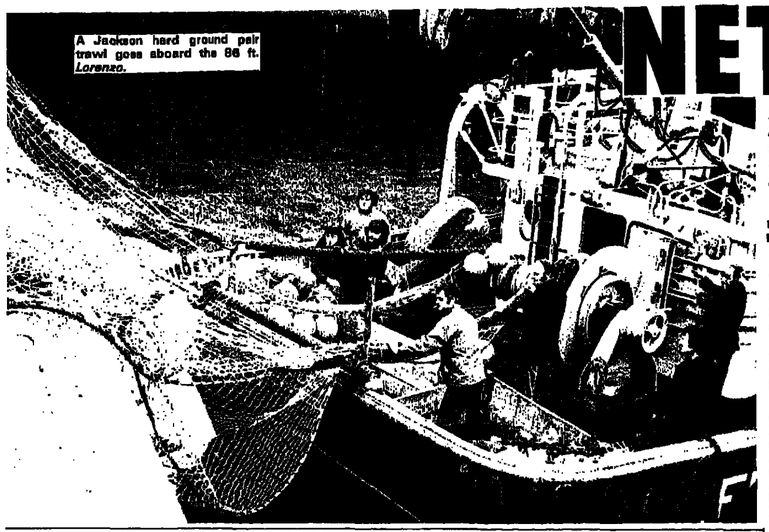
Tecnor fitted the vessel with a new Kelvin 500hp engine to turn a Henry Fleetwood propeller through a Reintjes reduction and reverse gearbox.

A two-drum set of seine rope reels of Tecnor's own manufacture was installed and, in addition, the vessel was fitted with an aluminium deckshelter.



Left: Tecnor's heavy-duty net drum specially developed for pair trawling. This 15-ton pull unit is seen aboard *Fairweather V*.

NET FIRMS



A Jackson hard ground pair trawl goes aboard the 86 ft. *Lorenzo*.

BOTH main net-making firms in Peterhead are being kept busy by the growing demand for white fish pair trawls. They are also developing an export trade to Canada where Scottish fishing techniques are being adopted by Canadian fishermen.

Jackson Trawls

THIS firm — jointly owned by master net-maker Arthur Buchan and Bridport-Gundry — is supplying white fish pair trawls suitable for fishing on hard ground.

Boats fishing with these nets include the 86 ft. Peterhead vessels *Benvolio* and *Lorenzo* (skippers Peter Ritchie and Arthur Buchan), and *Sparkling Star* and *Fairweather V* (skippers John Buchan and John Alec Buchan).

Similar models are on order for several Scottish vessels planning a switch to this fishery, including *Favonius*, *Fidelis II* (see page 86) and *Conquest*.

The nets for all these boats are broadly similar in design and feature a cut-away lower wing to give a good headline height. They are made of courlene twine.

The nets are a development from an earlier design used successfully last year by the Peterhead vessels *Faithful II* (Skipper Walter Milne) and *Ugievale II* (Skipper Arthur Buchan).

A scale model tested last year in the White Fish Authority's flume tank at Hull showed that a headline height of 24 ft. could be achieved.

The stout nets being made this year have been given an even longer headline to produce an even higher opening.

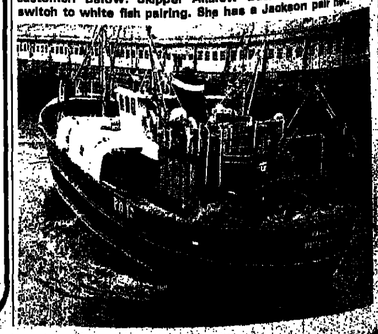
The nets have 8 in. meshes on the wings, 6½ in. meshes on the forenet and have a narrow wedge-shaped side panel. They have a headline of 164 ft., groundrope of 202 ft. and have 620 meshes around the fishing circle.

The groundrope rig incorporates 70 ft. of spherical bobbins flanked by a short rubber leg which extends to the end of the cut-away lower wing.

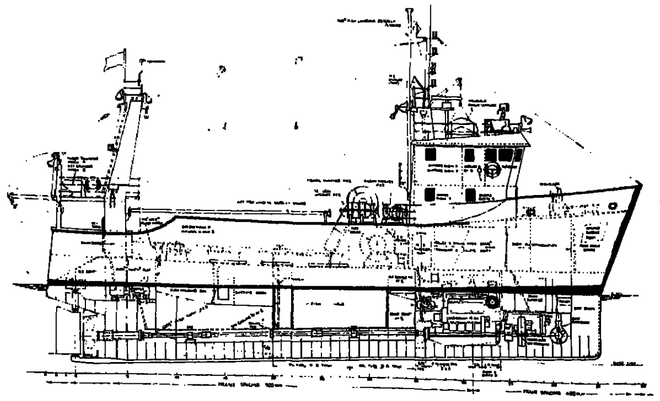
An extended rubber leg the continues the groundrope forward to meet the lower bridle.

Each boat tows with one warp which is joined to the net by a 20 ft. single sweep and two 20 ft. bridles. Parsons Trawlex chain is used for the sweep, lower bridle and for the groundrope rig. The headline is rigged with a lot of floats.

Jackson Trawls has also made a number of single-boat white fish trawls, including one for the 86 ft. Buckie-registered *Nordic Prince*. Norwegian-born skipper, Jan Huldal, has landed several catches in the region of 500 to 600 boxes caught with the net.



Above: Arthur Buchan (right), manager and part-owner of Jackson Trawls, helps out with a net for a North Shields customer. Below: Skipper Andrew Buchan's *Favonius* may switch to white fish pairing. She has a Jackson pair trawl.



New 30 m. stern trawler under construction for Richard Irvin and Sons Limited

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SWITCH WITH METHODS

PETERHEAD

Similar nets have been supplied to the Peterhead-registered *Day Dawn II* and the Fraserburgh vessels *Dayspring*, *Rivo* and *Radiant Way*.

Seine nets are still around half the firm's work.

The well-proven design is still very popular and, among new vessels to be supplied with them, are *St. Kilda* (Skipper John Thomson of Lossiemouth), *Fidelis II* (Skipper Stewart Buchan of Fraserburgh) and *Conquest* (Skipper Dennis Reid of Buckie).

Scotland's top seiner *Argonaut IV*, fishing under Skipper Davie Smith of Anstruther, regularly uses Jackson seine nets.

Quite a lot of prawn trawls are also made for the west coast of Scotland. A popular model is the 'high-flyer' which has been in use for the *last 18 months or so*.

With 8 in. meshes on the top wings and a smaller mesh on the bottom, it is designed to have a big headline height to catch white fish in addition to prawns.

A lot of these nets have been supplied to fishermen through two Mallaig chandlers, John Henderson and Johnstone Brothers. A few Peterhead boats have used these nets off the west coast, too.

Jackson Trawls recently started to export nets to Canada and hopes to develop this trade further. Several nets were originally made for the Canadian Government and, recently, more have been supplied through the agency of Gourock Industries of Halifax, Nova Scotia.

Seine nets as used in Scotland are popular, but the meshes in the bag have a 5½in. inside-the-knot measurement.

The Peterhead vessel *Juneve IV*, which together with her skipper and crew is in Newfoundland to teach local fishermen Scottish catching techniques, is using Jackson seines and trawls. She will leave them behind when she returns home.

Caley

THE NET-MAKING division of Caley Fisheries (Peterhead) employs 16 people and is very busy making nets and handling a terrific amount of repair work.

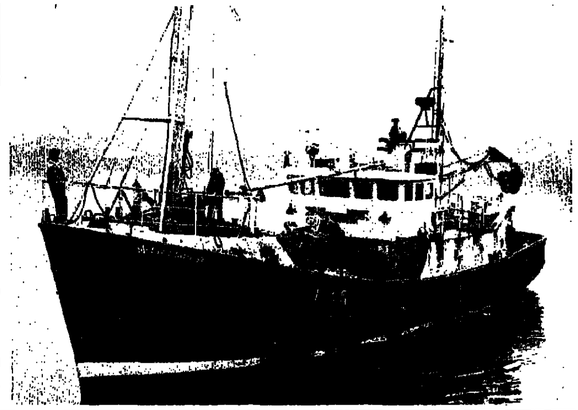
The close of the Cornish mackerel fishing saw a large number of mid-water trawls, including some from the bigger English stern fishers, being sent to the firm for repair. In March and April a lot of seine nets also need to be repaired.

During the early part of the year fish are more plentiful on rough bottoms and boats try to set their gear as close to the hard ground as possible. And often nets get damaged.

Caley has been to the forefront in designing and supplying white fish pair trawls and is still finding a demand for them.

Manager and master net-maker, Peter Buchan, designed the trawls which were first used by the successful Peterhead partnership *Unity* and *Morning Dawn* (skippers

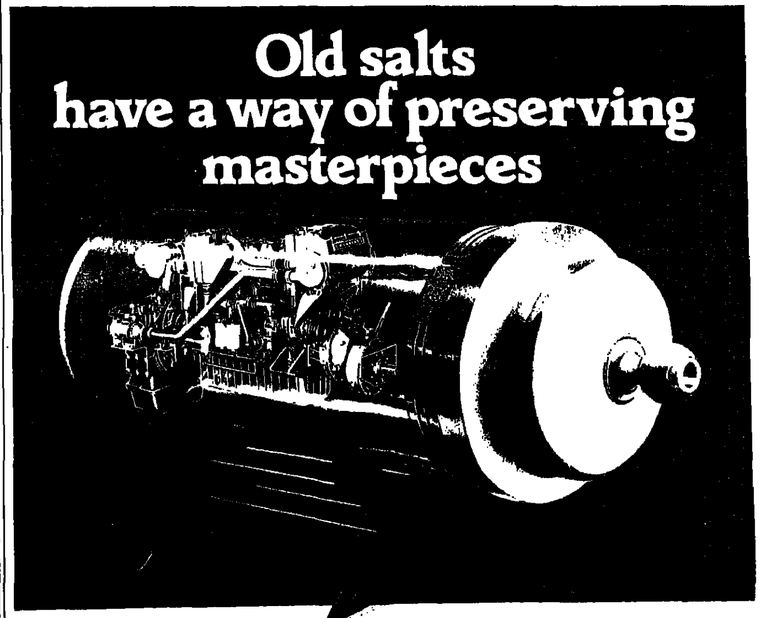
Turn to page 30



Right: *Starlight* (Skipper Alec Baird) has done exceptionally well on white fish pair trawling using an Apeldoorn four-panel nylon net. She has also used a Caley pair trawl for fishing hard ground.

An Apeldoorn white fish pair trawl being delivered to the Skiff *Benvolio* bought from Fleetwood by Skipper Peter Ritchie. Caley is agent for these Dutch nets which are proving very popular for working clean ground.

Old salts have a way of preserving masterpieces



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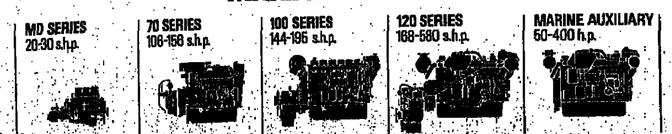

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From page 29

John McLean and David Morgan) in 1976.

These four-panel trawls are designed for the hard ground and were made from heavy courlene to withstand abrasion. Wing and forenet meshes are 4½ in. and the fishing circle is 520 meshes.

This year Mr Buchan has designed a white fish pair trawl for the 85 ft. steel vessel *Stanhope III* (Skipper Peter Strachan) which is to start white fish pair trawling for the first time.

The net will be suitable for two vessels each of 500 hp and, at Skipper Strachan's request, it will be larger than earlier models with a bigger opening.

Meshes on top wings and forenet, and in the side panels, will measure 8 in. Those on the lower part of the net will be kept at 4 in. to give the necessary strength for working hard ground.

The side panels will be 60 meshes deep, while the groundrope rig will be composed of 50 ft. of Teal rubber bobbins flanked by rubber legs and all strung on wire.

All these Caley white fish pair trawls are fished with a similar arrangement of bridles and sweeps, the length of which varies according to the preference of the skipper. They are rigged with 11 in. floats.

Caley is agent for the Dutch net maker Apeldoornse Nettenfabriek whose nylon four-panel midwater nets have been used with tremendous success by vessels pair trawling for white fish from Peterhead.

Fairweather V, Faithful II, Morning Dawn, Seringa, Shemara, Sparkling Star, Sundari, Ugievale II and *Unity* are the boats which have been using them.

Peterhead-based pair trawlers which switched to the fishery this year, or may start later on, are also equipped with these nets. These include *Acacia Wood, Benvolio, Golden Dawn, Lorenzo, Supreme, Challenger II, Nordic Prince, Stanhope III, Loch Kildonan* and the newly-built *Kestrel* and *Sunbeam*.

Similar nets have also been sent to several Firth of Forth vessels: the 67 ft. sister-ships *Nova Spero* and *Stardust II* owned by skippers Walter and David Fairnie.

Recently these two grossed £6,491 and £5,755, respectively, at North Shields after a three-day trip.

Designed for working over clean ground, these rectangular-opening nets are made in different sizes to suit individual vessels.

The majority are of dual-purpose design so that, by changing the bag, they are equally suitable for herring.

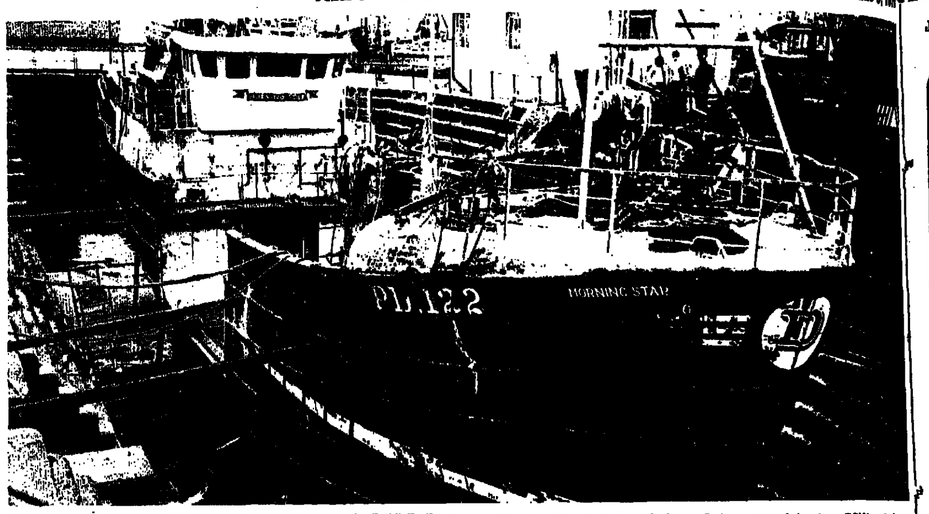
Vessels equipped with the dual purpose net include *Unity* and *Morning Dawn, Benvolio* and *Lorenzo*, also *Challenger II*.

All these boats, which have engines in the region of 600 to 700 hp, have a net which measures 74 m. on headline and footrope and 40 m. on the side panels. Meshes on wings and forenets are 24in.

Originally the Apeldoorn nets were fished using two warps per boat, but the skippers have perfected a technique whereby each vessel tows with only one warp.

An export trade in Scottish seine nets is developing, a number having been sent to Canada during the last 18 months or so.

Caley seines are currently in use aboard the 86 ft. Peterhead vessel *Juneve IV* which is in Newfoundland to teach local fishermen Scottish fishing methods.



Above: *Morning Star* in half with her bow section pulled 20 ft. forward for the tanks to be inserted.

Below: two of the three RSW tanks in position on *Morning Star*. The work is being carried out at Peterhead drydock.

PETERHEAD

MORNING STAR HAS 'STRETCH'

WORK IS now well underway on lengthening the Peterhead purse seiner *Morning Star*. She is also being fitted with refrigerated sea water tanks.

The lengthening job is being carried out in the dry-dock by Wood and Davidson Ltd. which 'stretched' the local purse seiner *Lunar Bow* four years ago.

Morning Star was put in the dock and cut in half. The bow section was pulled forward 20 ft.

Each of three tanks and the appropriate sections of hull are being pre-fabricated as separate units before being put in position.

Once the new midships section is all in place, expanded polyurethane foam will be pumped between the outer walls of the tanks and the boat's sides, deckhead and bulkheads to form the insulation.

Morning Star is being fitted with a Kvaerner model 92/6Es cooling plant.

In addition, a steel shelterdeck extending from whaleback to deckhouse is to be fitted and the wheelhouse is to be raised. The hatches for the RSW tanks will be carried up to shelterdeck level and will have aluminium covers.

Other modifications will include placing the pursing gallows on the shelterdeck.

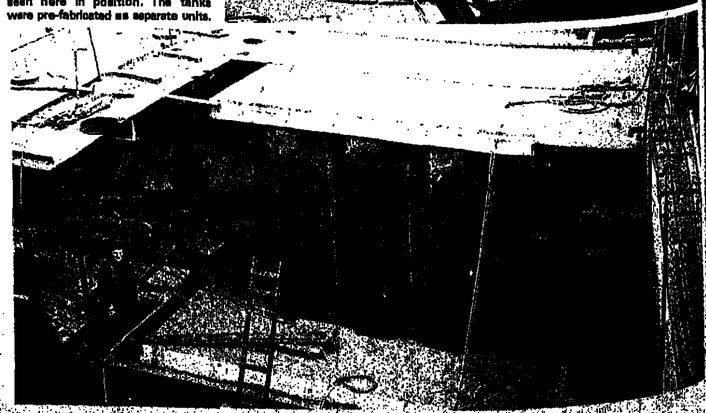
The lengthening was designed by the Napier Co. (Arbroath) and agent for Kvaerner of Norway is Scandinavian Marine Sales Ltd. of Glasgow.

Morning Star, whose lines were designed by Tynedraft Design Ltd. of Newcastle, fishes under Skipper James Duncan of Peterhead. She was originally ordered from the Berwick yard of Intrepid Marine International but, following the bankruptcy of this yard in 1975, Skipper Duncan had the partially-completed vessel towed to Peterhead. He employed local firms to complete the work.

The boat has had two successful winters on Cornish mackerel since being completed in 1976.

Wood and Davidson Ltd., a division of Aberdeen's John Wood Group, is also carrying out modifications to another Peterhead purse seiner, the 100 ft. *Vigilant*.

Below: Two of the three RSW tanks seen here in position. The tanks were pre-fabricated as separate units.



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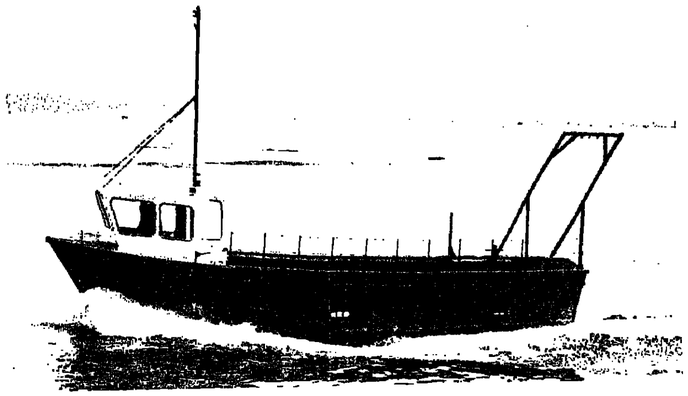

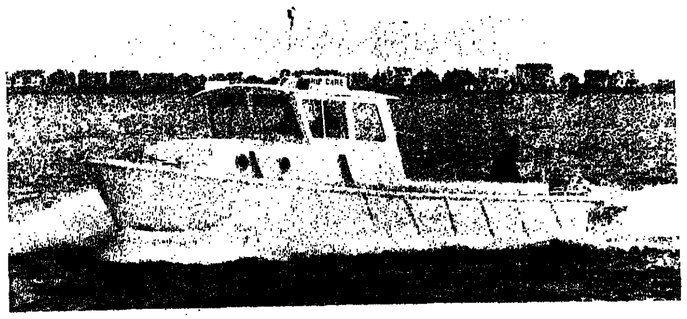

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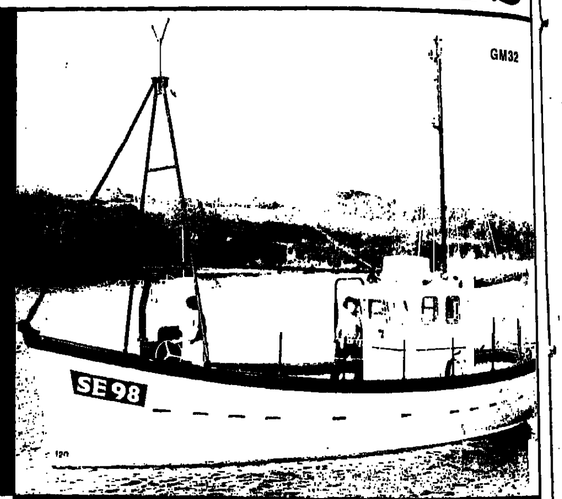
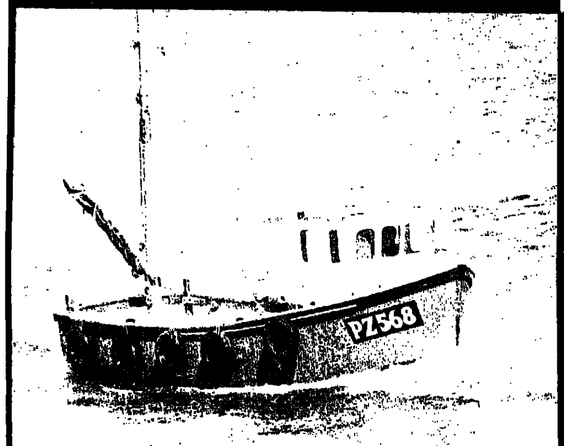
GM43, Double rigged prawn Trawler

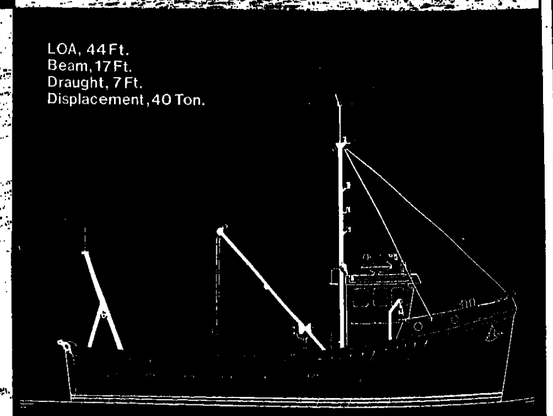


GM32



GM26

LOA, 44 Ft.
Beam, 17 Ft.
Draught, 7 Ft.
Displacement, 40 Ton.



GM43, Forward wheelhouse stern Trawler

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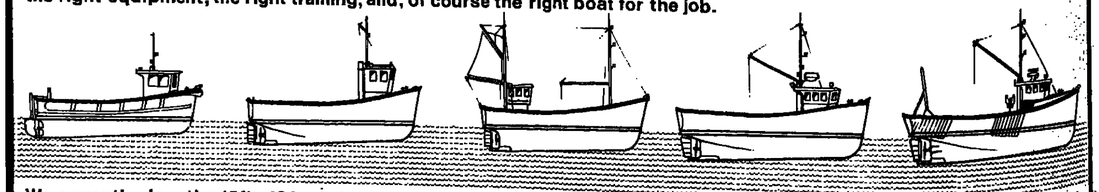

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Longer Accord has RSW system

BUILDER FITS NEW MIDSHIP SECTION

Accord (top and below) is now over 100 ft. long. She is seen (inset) at 86 ft. long when she had just been built by Hakvoort.

ONE OF the increasing number of Scottish vessels being lengthened and fitted with refrigerated seawater (RSW) tanks is the Peterhead multi-purpose boat *Accord*.

The work was carried out by the K. Hakvoort yard in Holland and also entailed fitting the vessel with side thrusters, a more powerful engine and new winches.

At the time of her building at the Hakvoort yard in 1970 *Accord* was one of the more unusual vessels to join the Scottish fleet.

Skipper James Duthie had her designed and equipped to work as a stern trawler, pair trawler, purse seiner or fly-dragging seiner with equal efficiency, and to provide safety and ease of working for the crew.

Of stern trawler layout with the engineroom aft and fishroom amidships, *Accord* had an overall length of 86 ft. and a beam of 24 ft. She was powered by a Caterpillar engine of 565 hp.

She was designed to work a variety of fishing methods, but spent much of the following seven years pair trawling for herring.

Skipper Duthie was always concerned to land herring in as good a condition as possible and, at one stage, used chilled seawater containers in which fish could be transported overland to the processor.

However, with the growing emphasis on quality rather than quantity in the herring and mackerel fisheries, it has become evident that RSW tanks are more effective than chilled seawater systems.

Accord has, therefore, been modified in line with these developments and she spent a short time purse seining for mackerel off south-west England using the tanks.

The vessel was cut in half amidships and a new 20 ft. section with three insulated tanks was inserted.

Promac of Holland made and supplied the fully-automatic refrigeration plant which is designed to chill 40 cu.m. of seawater from 12 degrees C. down to 0 degrees C. in four hours.

It uses a seawater cooler of a new design incorporating aluminium-brass pipes with a diameter of over 42 mm. The pipe plates are made from the long life material Inoxeder.

PETERHEAD

The boat's electrical system has been up-graded to 220 V a.c. and the compressor for the refrigeration plant is driven from a 40 hp electric motor.

Accord has also been re-powered by a Caterpillar D398B engine developing 850 hp at 1,225 rpm. It turns a Pay and Brinck controllable pitch propeller through a P. and B. gearbox of 3.9:1 reduction ratio.

Two new Caterpillar auxiliary engines have been fitted: the larger 124 hp unit drives a Newage Stamford 130 KVA 220 V alternator, whilst the smaller 48 hp engine provides power for a Newage Stamford 220 V alternator of 60 kVA.

Other new equipment includes Brunvoll side thrusters, Karmoy main and auxiliary winches and a Karmoy fish pump.

Hydraulic power for the thrusters, winches and fish pump, and for the existing Rapp X-2 power block, is provided by Vickers pumps.

New instruments in the wheelhouse include C-Tech Omni Sonar, 'Sailor' T126 R105 radio telephone and a RSW tank temperature indicator.

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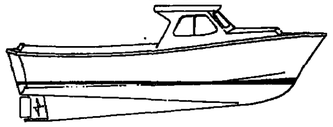
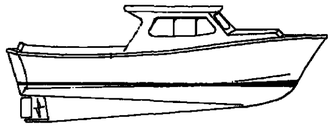
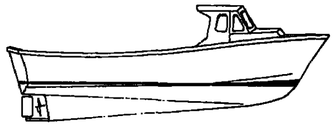


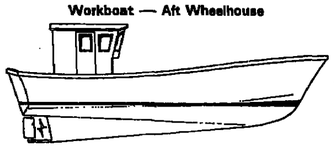
Standard Version — Ext. Wheelhouse



Workboat — Fwd. Wheelhouse



Workboat — Aft Wheelhouse



Hull design: Robert Tucker, A.R.I.N.A.

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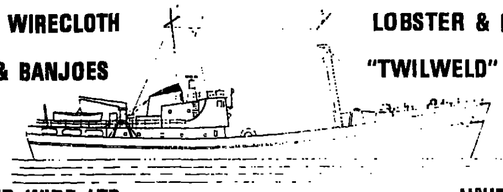

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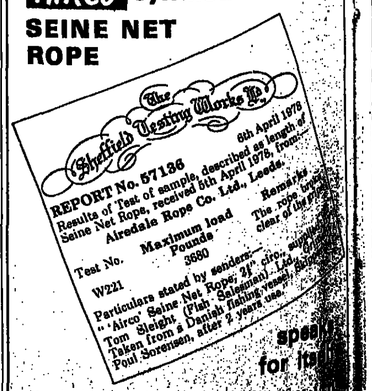

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BUCKIE'S 'BOUNTEOUS'

THE 56ft. stern trawler *Bounteous* owned by Buckie skipper, Edward Phimister and his partners, is the ninth vessel in a very popular series of small stern draggers.

Herd and Mackenzie of Buckie built these vessels starting with *Unity* (BCK57) in 1972.

These handy vessels, of double-chine hull form, have lent themselves ideally to bottom and mid-water trawling—and a number regularly go to the winter sprat fisheries in the Moray Firth and off north-east England.

Bounteous, which is a member of the Fishermen's Mutual Association (Buckie) Ltd., has started her career single-boat trawling for white fish from Peterhead.

With a beam of 18ft. 6in. and tonnage of under 25, the boat has a transom stern and raked soft hose stem. Below deck she is sub-divided from forward into engineroom, cabin and fishroom.

Power is provided by a six-cylinder Kelvin engine which develops 310 shp at 1,200 rpm. The unit is coupled through a Kelvin 3¼:1 reduction and reverse gearbox to a Friedenthal fixed-pitch propeller housed in a Kort nozzle.

The Dowty variable delivery hydraulic pump for the trawl winch, and a hydraulic pump unit for power block and cargo winch, are driven from the fore-end of the engine through a Sutherland clutch operated step-up gearbox.

Two 3.6 kW 24V Transmotor generators, a Gilbert Gilkes and Gordon 250/700 Gilmec bilge and general service pump, and the steering gear pump, are also driven from the main engine.

An AC7 alternator and a hydraulic pump for the cargo winch are driven from a small two-cylinder Lister auxillary engine.

On deck a D. F. Sutherland trawl winch is positioned athwartships, aft of the superstructure, and is fitted with dog clutches and a reverse control.

A combined gantry and towing gallows spans the after part of the deck and a Rapp 19RA power block is hung on a Hiab crane. The Rapp cargo winch is mounted on the landing derrick.

Arranged for carrying fish in boxes or in bulk, the fishroom in *Bounteous* is insulated with polystyrene faced with aluminium sheet and is fitted with aluminium staunchions and boards.

Sonar

Electronic instruments in the wheelhouse include Elac LAZ72 echo sounder with LAZ62 Fishlupe, Wesmar 220 sonar, 'Sailor' T126 R105 radio telephone, two 'Sailor' RT144B vhf radio telephones, Mermaid 23 Watch Receiver, Robertson AP30 Automatic Pilot, plus Decca Mk.21 Navigator, 350T Track Plotter and 110 radar.

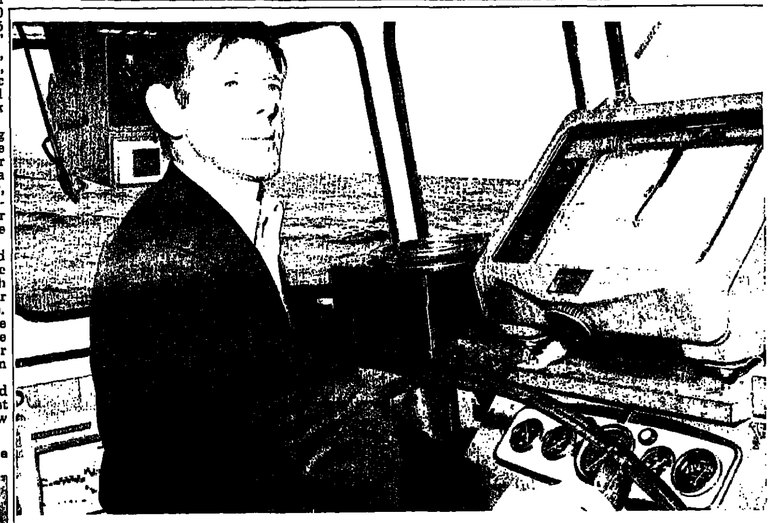
Tenfjord 76 FSG steering gear is coupled to the autopilot, and other wheelhouse fittings include a Bostrom Viking 300 chair, Morse engine and winch controls, also the alarm panel for the Tecaid Electronics fire detection system.

The combined galley and messroom, located in the superstructure, is fitted with a Kempsafe oil-fired cooker and a small Electrolux fridge.

A toilet is housed in the forward end of the superstructure and bunks for six are positioned in the cabin aft of the engineroom.

Two tanks in the stern hold 1,800 gallons of fuel oil, whilst fresh water is carried below the fishroom.

Below: *Bounteous* during final fitting out work in Buckie harbour. She is now trawling for white fish from Peterhead under Skipper Edward Phimister. She is powered by a 310 shp Kelvin diesel and has a Kort nozzle.



***Bounteous* has a Sutherland trawl winch at the after side of the super-structure.**

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Seawater shows bright blue. Colours of displayed echoes vary from red – for the most intense returns such as those from a hard seabed – through orange, yellow, dark and light green to white for the weakest echoes of all – such as plankton – and light blue for non-echoes. Each colour has two tones. Dense fish shoals show red to orange, sparse shoals yellow through dark and light green to white. Soft and hard seabeds are similarly easy to distinguish, and fish on the seabed are discriminated from the bottom itself with a display which is superior to white line and grey line definition.

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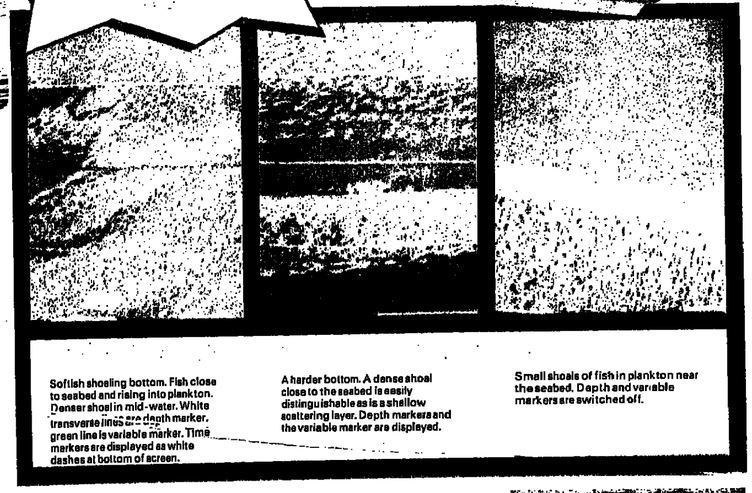

Soft fish shoaling bottom. Fish close to seabed and rising into plankton. Denser shoal in mid-water. White transverse lines are depth marker. green line is variable marker. Time markers are displayed as white dashes at bottom of screen.

A harder bottom. A dense shoal close to the seabed is easily distinguishable as is a shallow scattering layer. Depth markers and the variable marker are displayed.

Small shoals of fish in plankton near the seabed. Depth and variable markers are switched off.

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'SPEYSIDE' STARTS NEW ERA FOR ABERDEEN

'Deepsea' boat to work in EEC zone

ABERDEEN trawler owners are now being forced to start a rebuilding programme as a high proportion of the fleet is nearing the end of its economic life. At least three companies are already having new boats built and others are expected to place orders with British yards in the near future.

The loss of the deep water grounds and uncertainties over the Common Fisheries Policy have persuaded owners that smaller stern trawlers in the 80 to 100 ft. class will be most suitable for the port. These trawlers, equipped for bottom and mid-water work, will be able to fish for a variety of species within the EEC limits and have ample seaworthiness to cope with bad seas.

The first vessel in this new class is the 86 ft. *Speyside*. She arrived at Aberdeen in April and is now bottom trawling for white fish off the west coast of Scotland. She has been built in Lowestoft by Richards (Shipbuilders) Ltd. for Skipper Peter Simpson of Buckie and others. Her owners say they are very impressed by her seakeeping capabilities.

A sister-ship, to be named *River Dee*, will be delivered by Richards in the summer to another well known skipper, William Wilson and his partners of the Moray Firth.

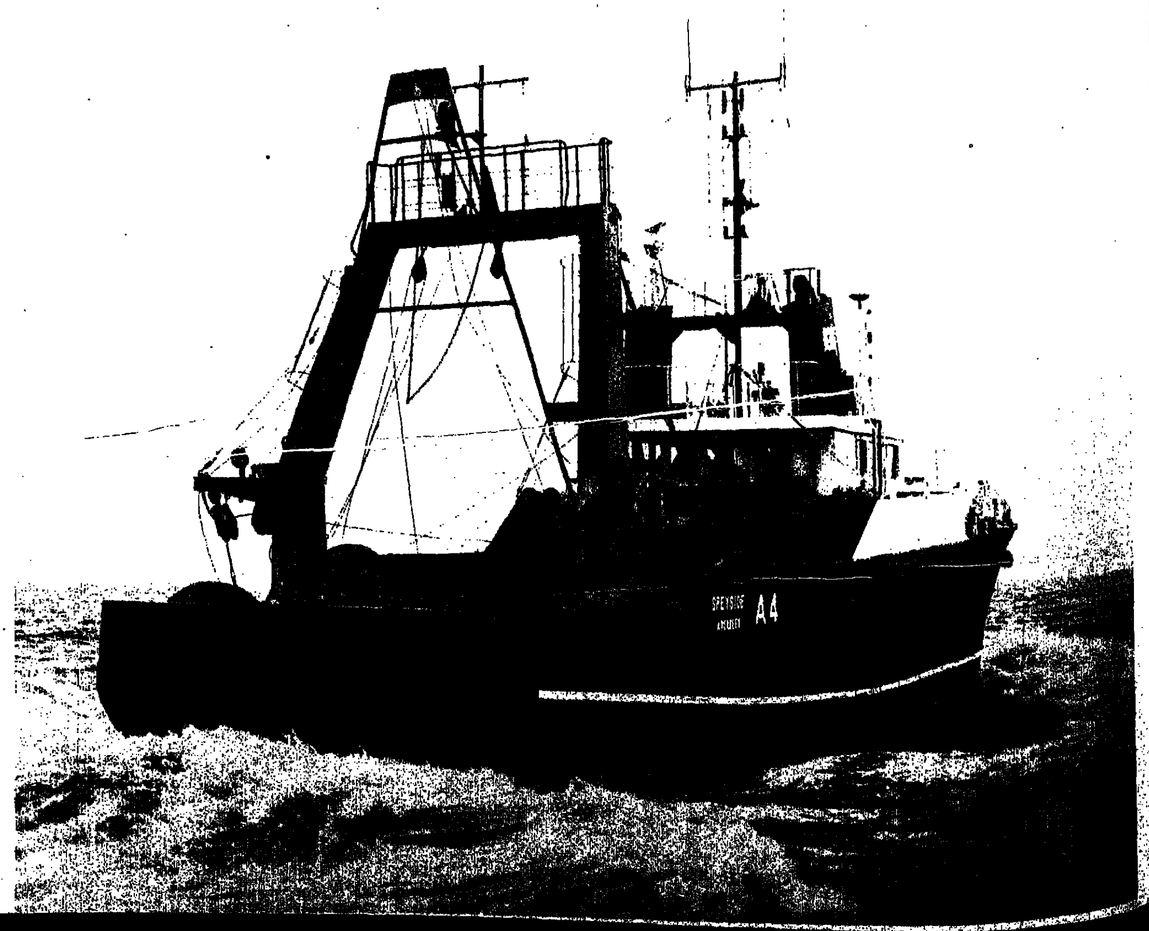
Speyside is managed and part-owned by the Spinningdale Fishing Co. of Aberdeen and it is company policy to participate in vessel ownership with skippers and crews.

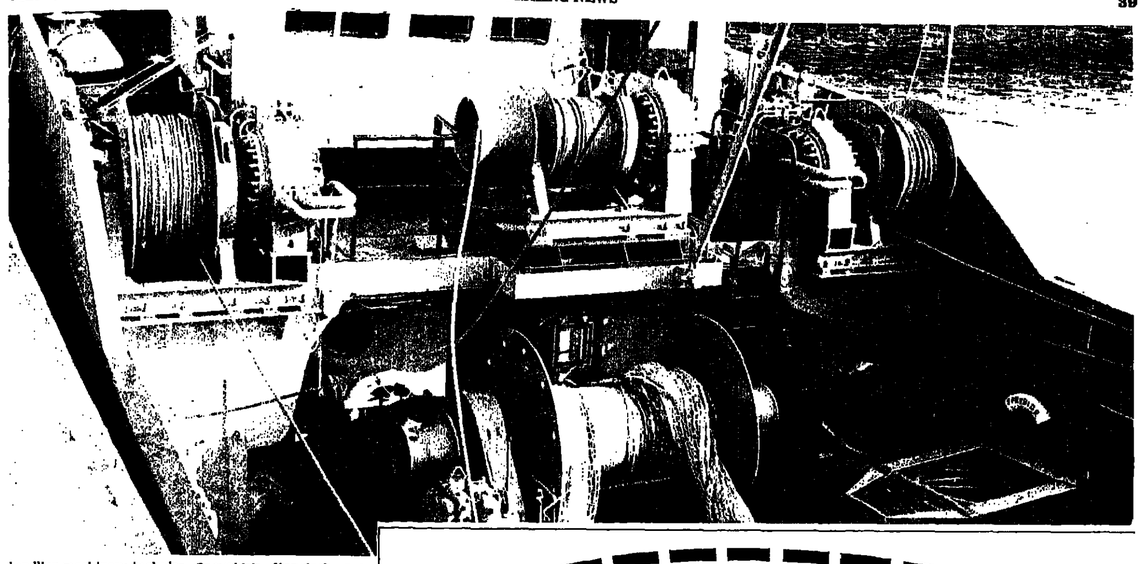
Skipper Simpson and his son James, who sails as mate aboard *Speyside*, own about 50 per cent of the shares in the vessel which was built at a cost of £750,000. *Speyside's* crew of nine almost all come from the Buckie and Aberdeen areas.

She will spend the summer bottom trawling for white fish from Aberdeen, but Skipper Simpson plans to switch to mid-water trawling for mackerel off south-west England next winter like many Scottish skippers.

One of the more unusual features of *Speyside* is her ample 25ft. 6 in. beam which has been designed to give more space on deck and in the fishroom. It also gives a high standard of stability and seaworthiness in all conditions.

Deck layout has been planned with a view to safety and ease of working. Gear handling machinery includes a net drum.





Speyside's* Norwinch gear-handling machinery showing the split trawl winches and gilson winch on the after end of the fo'csle deck, also the net drum at the fore end of the *trawl deck. Controls are semi-automatic.

Split trawl winches, sited on the after end of the fo'csle deck, keep the warps well clear of the trawl deck and the vessel is the first in the UK fitted with the new Norwinch automatic trawl control system to give a fair measure of automation when working the trawl.

Speyside, built to Lloyds + 100 A1 Stern Trawler — LMC +UMS Classification, has an overall length of 26.25 m. (86 ft.); registered length, 24.24 m. (79 ft. 6 in.); moulded beam, 7.80 m. (25 ft. 6 in.); and moulded depth, 3.80 m. (12 ft. 6 in.).

Under Part 1 Registry she has a gross tonnage of 194.40 and net tonnage of 64.62.

She has been built throughout of Lloyds-tested mild steel and complies with all requirements of the Department of Trade and White Fish Authority.

All steel plates were shot blasted and primed with Nuplate Primer 'A' prior to fabrication and scantlings are ten per cent above Lloyds' minimum requirements.

The vessel is of round bilge form and has a raked bar stern and transom stern. Her underdeck is sub-divided from forward into forepeak, engineroom, fishroom, net store and steering gear compartment.

Some 40 tonnes of fuel oil are carried in the double bottom below the fishroom and in tanks at the stern, while 12 tonnes of fresh water are carried in wing tanks in the engine room.

Water ballast tanks are fitted in the stern to enable both the draft and trim to be controlled within fairly wide limits to suit requirements while steaming and fishing.

Turn to page 40

Propulsion is provided by a Mirrlees Blackstone ESLSM four-stroke, eight-cylinder, diesel engine which has a continuous rating of 900 bhp at 800 rpm.

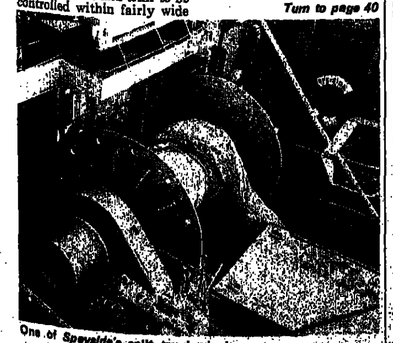
The unit drives an Ulstein 2,050 mm. diameter controllable pitch propeller through an Ulstein 220-AGSC gearbox of 2.96:1 reduction ratio. The engine has compressed air starting and is fitted with a Brown Boveri turbocharger.

An 80 kW ECC a.c. alternator is belt-driven off the extension shaft at the fore end of the engine. Also, two hydraulic pumps for the deck machinery are driven off the fore end of the extension shaft through a single input, twin output, Frank Mohn gearbox and clutch.

Pelican Engineering (Sales) Ltd. of Leeds assembled and supplied the auxiliary generating set based on a Gardner 6LXB fresh water cooled air starting engine of 127 bhp at 1,500 rpm.

This drives a clutch-operated Gilbert Gilkes and Gordon 300/875 bilge and general service pump, an ECC 70 kW alternator and a clutch-operated Worthington Simpson air compressor.

Electrically-driven equipment in the engineroom includes a GGG 300/875 bilge



One of Speyside's split trawl winches.

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SPEYSIDE

From page 39

and general service pump, Worthington Simpson air compressor, Megator Compak fresh water and sea water pressure sets, Worthington Simpson fuel oil transfer pump, Dowty standby pump for the main gearbox, two Norwinch auxiliary hydraulic pumps for the deck machinery and the steering gear pump.

L.E.C. Marine Ltd. of Lowestoft supplied the deadfront-type main switchboard and also carried out the electrical installation. The electrical system is supplied from the two diesel-driven alternators, only one of which can be in use at a time.

Power circuits are fed from the 440 V, three phase, 50 Hz supply whilst a 230 V, single phase, 50 Hz circuit feeds lighting systems, etc. The 24 V batteries are charged via a transformer rectifier from the 230V supply.

Lube oil and hydraulic oil tanks each of 100-gallon capacity are carried in the engineroom.

All the low pressure hydraulic deck machinery is of Norwinch manufacture. Each split trawl winch has capacity for 500 fathoms of 2¼ in. circ. wire and is fitted with Lebus spooling equipment. Hauling speed can be steplessly controlled from zero to maximum and the winches have two speed and power ranges.

Each winch is designed to have the following duties:

Empty barrel

12.7 tons at a hauling speed of 0-19 m/min.

5.1 tons at a hauling speed of 0-38 m/min.

Mid barrel

4.8 tons at a hauling speed of 0-50 m/min.

1.9 tons at a hauling speed of 0-100 m/min.

Full barrel

3.0 tons at a hauling speed of 0-80 m/min.

1.2 tons at a hauling speed of 0-160 m/min.

All functions of the trawl winches can be controlled from a console in the after end of the wheelhouse, but speed and direction plus variable braking can also be effected locally.

Speyside's Norwinch automatic trawl control system is arranged for electro-hydraulic remote operation. It includes complete instrumentation to register variations in gear while towing and to implement corrective measures.

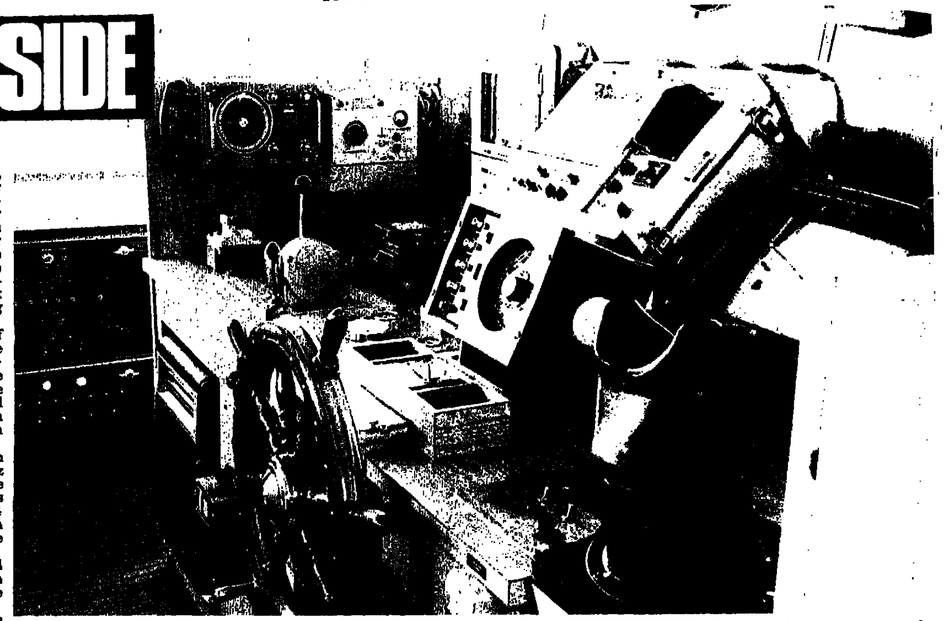
It allows a pre-determined length of warp to be automatically paid out and recovered. In addition, it automatically adjusts warp length when the vessel is towing, turning and moving in a seaway.

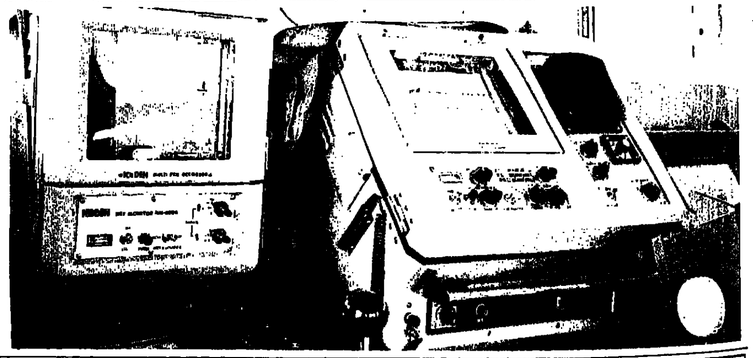
This will provide a more even passage for the gear through the water to retain the correct net geometry.

If the net catches on an obstruction, warp tension will increase to a pre-set maximum and then the winches will pay out warp and sound an alarm.

The net drum, located on

Turn to page 43





Above: electronics are grouped in a console aboard *Speyside*. The wheelhouse has been finished to a high standard.

Right: Marconi supplied the fish finding aids aboard *Speyside* which include Koden net monitor (left) and Fishgraph K echo sounder with fishscope.

An electric cooker by Kempastu is fitted in the combined galley and messroom.

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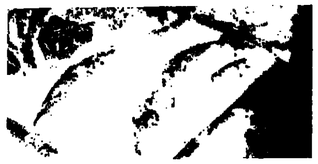

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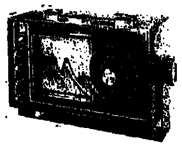

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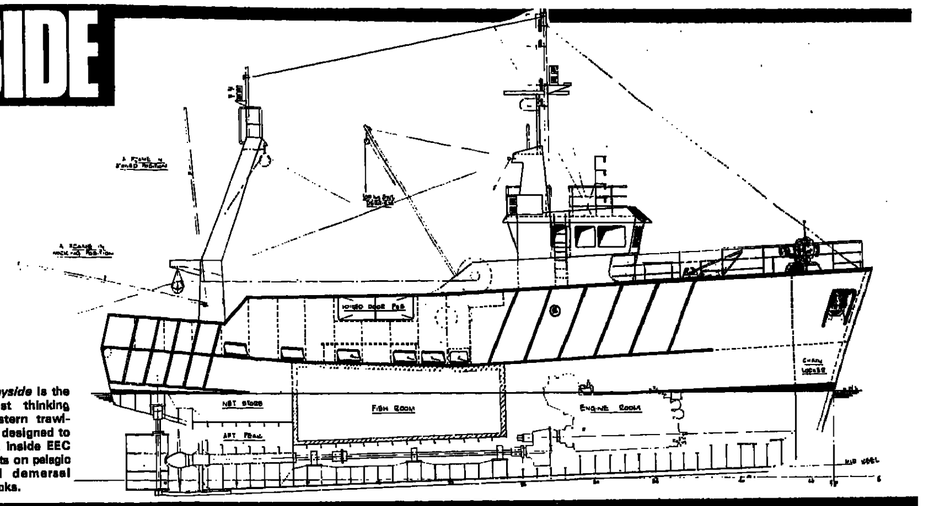
SPEYSIDE



Speyside is the latest thinking in stern trawlers designed to fish inside EEC limits on pelagic and demersal stocks.

From page 40

the centre line at the forward end of the main deck, also has two speed and power ranges with stepless speed control; maximum pull is eight tons.

A gilson winch with a declutchable drum and a warping head is fitted on the after end of the fo'csle deck, between the trawl winches.

Net drum and gilson winch have local controls, but speed and direction can also be governed from the wheelhouse. A Norwinch windlass is sited on the fore end of the fo'csle deck.

Hydraulic power for the trawl winches, net drum and gilson winch is provided by two Allweiler type SMGH 940 pumps driven from the fore end of the main engine. About 200 hp will be transmitted through the Frank Mohn gearbox.

The two Norwinch electrically-driven emergency hydraulic pumps can be connected to the main hydraulic system through shut-off valves to provide standby power for winches, net drum and gilson winch. They are also used as primary supply for the windlass and the winch auto-tensioning device.

The stern gantry is fitted with outriggers to carry separate towing blocks for bottom and mid-water trawling.

An 'A' frame outhauler is fitted on the aft side of the gantry and a 15 in. diameter stern roller is fitted at deck level across the transom, in way of the perforated steel stern gates.

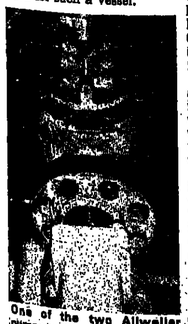
All the blocks, cleats, etc., for handling the gear are carried on the stern gantry, but a fish tackle block and a topping lift for working the landing derrick are located on the crosstree between the funnels.

The deck ponds consist of hardwood boards in steel stanchions. A Cosalt stainless steel fish washer is carried on deck, and Chalmit floodlights are mounted on the superstructure.

The fishroom has a capacity of 116 cu.m. (4,100 cu. ft.) and is insulated to a high standard with foamed polyurethane, lined with 18 mm. marine plywood faced with 12 gauge aluminium sheet.

Arranged for shelving, boxing and bulk carrying, the fishroom has aluminium stanchions and boards and is served by steel hatches with aluminium covers.

The nine-man accommodation arranged below the fo'csle deck is of a very high standard for such a vessel.



One of the two Allweiler pumps which supply hydraulic power to the gear-handling machinery.

There is a cabin for the skipper, plus a two-berth cabin for mate and engineer. The remainder of the crew are housed in a six-berth cabin.

To reduce noise levels, the floor over the engineroom is insulated and internal divisions within the accommodation are 'floating' on rubber mounts.

A Kempsafe electric cooker and hot water cylinder are fitted in the combined galley and messroom, and an LEC deep freeze cabinet is carried in the provision store.

Other facilities in the accommodation include two Shanks siphonic toilets, shower, hand basin and a clothes washing tub. Heating is by electric radiators.

The spacious wheelhouse sets new standards for a vessel of this size in the Aberdeen fleet.

Equipment from Decca includes Mk. 21 Navigator, 450 Automatic Pilot and 350 T Track Plotter. Fish finding and communications aids were supplied by Marconi.

Fish finders include Wesmar SS230 sonar with R50 recorder; Fishgraph K type SRM-872AV multi-stylus recording echo sounder with fishscope display unit; and Koden NM-850A Net Monitor.

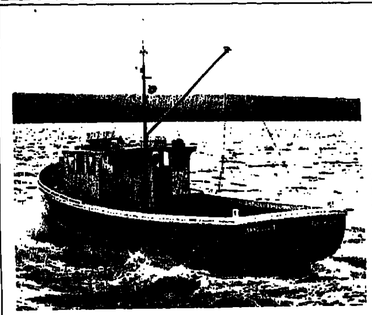
Communications equipment includes 'Sailor' T126 R105 SSB radio telephone; two 'Sailor' RT144B VHF radio telephones; Warden 11 watch keeping receiver; Minicall 11 Intercom system and Mariner distress radio telephone.

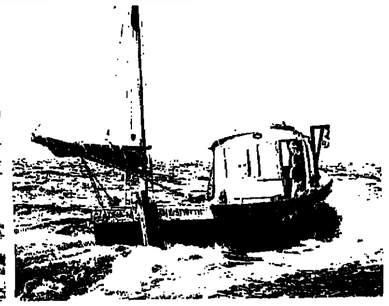
Marconi also supplied the Koden MD-506 radar with variable range marker and, later this year, will be fitting her with the new Chromoscope K colour TV type echo sounder (see page 20).

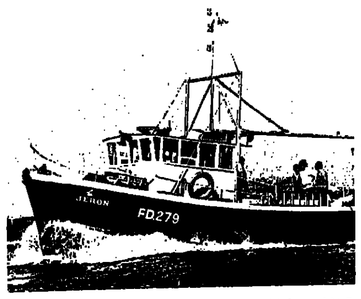
A Speich revolving screen and de-icing heaters are fitted in one of the forward facing windows in the wheelhouse, while a Wynstument blade-type wiper is supplied for the winch console window.

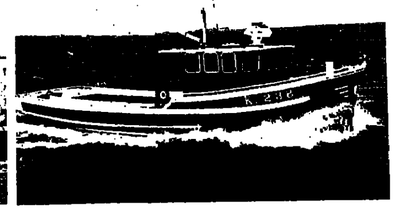
An E. Vejvad Hansen chair is also fitted in the wheelhouse and a Marconi 'Sailor' R108 radio receiver is installed in the skipper's cabin, with an extension speaker in the messroom.

Other equipment aboard the vessel includes a Francis searchlight carried on the wheelhouse top, Tenford H 330.115 TC ESG steering gear and Whale hand-operated bilge and general service pumps.









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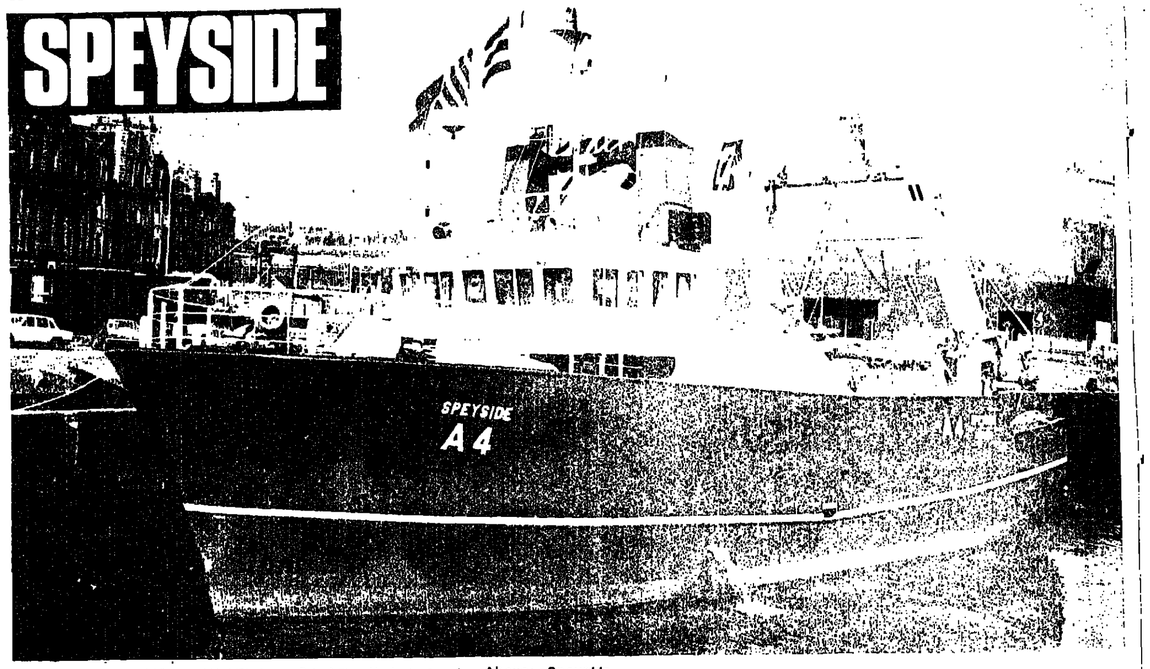


Scots hull taken over by Norway

AN 85 FT. steel hull which was tied-up in Aberdeen for some time has now been fitted out as a side trawler. She is fishing under Norwegian owners.

The vessel, originally ordered by Fraserburgh owners from the Dundee yard of Smith and Hutton, was to be named *Honey Dew*. Her Hull was built by the Middlesbrough yard of Tees Marine Services under sub-contract to Smith and Hutton.

While the hull was in Dundee waiting to be fitted out the yard got into financial difficulties and shut down in 1975. Sometime later the hull of *Honey Dew* was towed to Aberdeen to await a decision on its future.

Eventually the owners decided to pull out of the venture and the hull, together with main and auxiliary engines and several other items of equipment, was sold to Norwegian owners.

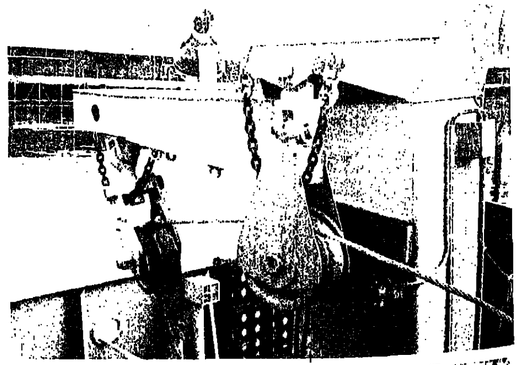
The vessel, renamed *Teslevag*, has been completed as a side trawler by the yard of Rabben Mek Verksted for Messrs Ole N. Midvelt & Soner and is now fishing in the North Sea.

Her beam is 22 ft. and the vessel has a transom stern and is powered by a Caterpillar D348 engine of 725 hp. This drives a controllable pitch propeller through a P. and B. reduction gearbox.

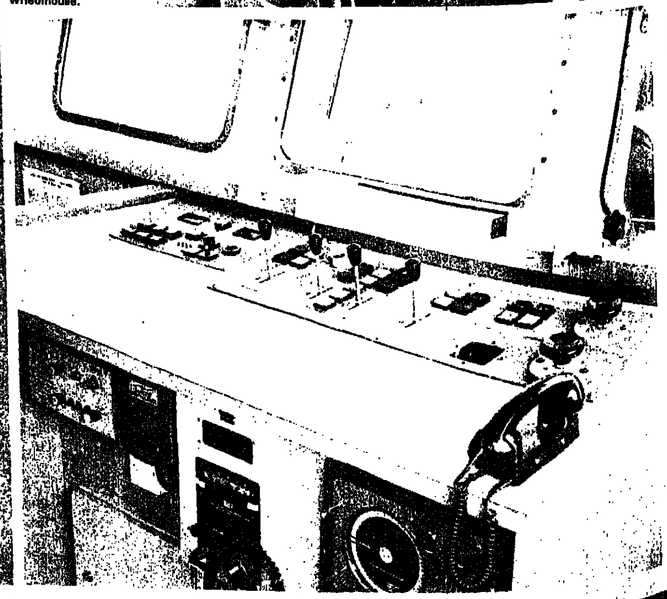
Two Ford auxiliary engines are fitted and gear-handling machinery includes Karmoy winches. Elac and Kelvin Hughes fish finders are fitted in the wheelhouse.

Honey Dew *seen in drydock at Dundee prior to the collapse of the Smith and Hutton yard. She is now Norwegian owned.*

Above: *Speyside* soon after her arrival at her home port of Aberdeen. Her skipper and his son own part of this new-class boat.



Right: the stern gantry is fitted with outriggers which carry separate towing blocks for bottom and mid-water trawling.



Below: *Speyside's* remote control console for the deck machinery is fitted in the after end of the wheelhouse.

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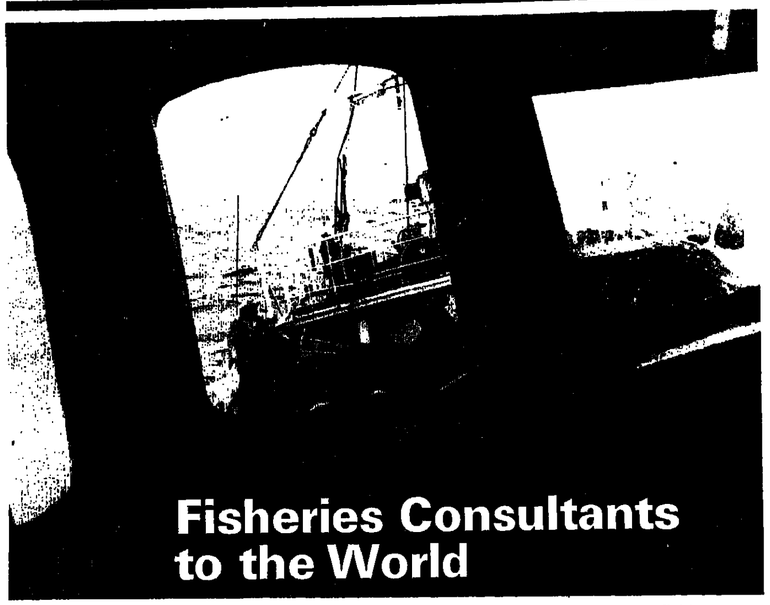

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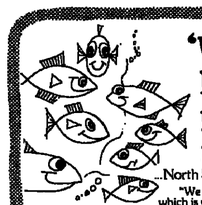

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WHEN SCOTS DRIFTED INTO Yarmouth

THE SCOTTISH fishing industry enjoyed a long and close association with East Anglian fisheries. This extended back to about the middle of the last century. Numerous fifies, followed by the zulus — when they were initially introduced in 1879 — made the annual voyage to join in the 'Home Fishing,' operating from Yarmouth and Lowestoft. It is impossible to do full justice concerning their activities in eastern waters in one brief article but, as much has already been written concerning the sail fishing vessels based on the twin Anglian ports, this article by L. W. HAWKINS concentrates on the defunct Scottish steam herring drifter and the motor fishing vessel, still happily with us.

Scots drifters steaming into Yarmouth over half-a-century ago to start the 'Home Fishing' herring season. Hundreds of boats made the trip until the stocks ran down.

THE SCOTS introduced steam power for line and drift net fishing vessels to the English east coast. Many fine examples were built during the last two decades of the nineteenth century.

The application of steam to line and net fishing vessels had its beginnings in Scottish waters about 1867, when a boat built by M'Kenzie at Lower Pulteney Town, Wick, was put into service. She was named *George Lough* after the MP for Wick Burghs.

On her first trip she took a force of militia to Fort George. What success she met with as a fishing vessel was not recorded at the time, but no doubt the much valuable experience gained was later put to good use.

A brief note in Peter F. Anson's book *Fishing Boats and Fisherfolk of the East Coast of Scotland* mentions a steam fishing vessel being built at Aberdeen in 1871. Unfortunately no further details were noted, but she may have been a conversion to an existing hull.

An early attempt to apply steam machinery to a fishing boat was made about 1875 at Fraserburgh but, two years later, a young man named David Allen built *Onward* at Leith which was fitted with 16 hp machinery. She was 55ft. on the keel and is reputed to have been the first true steam drifter. Registered in the December of the same year as LH 880, her owners were the Forth Steam Fishing Co.

Fleets

Not until 1893 was mention made of two Scottish steam fishing vessels operating from Yarmouth — *Perseverance* and *Reliance*, both of Peterhead.

During the peak period of that autumn's 'Home Fishing' there were 90 boats from Banff, 30 from Kirkcaldy, 20 from Inverness, ten from Leith and the remainder from Berwick, Fraserburgh and Wick.

During the summer of 1896 the harbour authorities at Yarmouth were concerned about where the Scottish boats would berth when they came in for the autumn fishing. The area they normally occupied next to Ballast Quay was filled by a considerable number of old smacks belonging to Hewett & Co. (The Short Blue Fleet).

We do not have to look very far to find the cause of it all. On February 17, 1896, the Great Grimsby Ice Co. disposed of its fleet to Hewett for £38,000.

The vessels involved consisted of five steam carriers and 95 smacks. This large fleet began to arrive at Yarmouth over the next couple of months.

Most of the smacks were badly in need of repairs to leaking hulls. The Port and Haven authorities made valiant efforts to keep as much mooring space available as possible — some of the older smacks being towed up to Breydon Water and moored by the main channel to await disposal.

A good autumn fishing followed with a total of 19,250 lasts of herring landed during the year. During the peak period of the fishery 161 Scottish boats were operating.

Collisions in the Yare were very frequent due to the congested conditions.

In 1897, 24 masters of some of the fifies and zulus were prosecuted at one session by the local magistrates for not having their port numbers painted up on each side of the mainsail. Each was fined 2/6d with 9/- costs.

The year 1900 saw a record number of 404 Scottish boats working out of Yarmouth. The fleet consisted of 111 from Banff, 65 from Kirkcaldy, 44 from Leith, 43 from Fraserburgh, 39 from Inverness, 32 from Berwick, 21 from Montrose, 20 from Wick, 17 from Peterhead, six from Aberdeen, four from Arbroath and two from Stornoway. Included in these figures were the impressive total of 70 steam-powered vessels.

Prices

The vanguard of the Scottish fleet put into Yarmouth on September 19, and a good season followed. A total of 29,000 lasts being landed, the average price worked out from between 1s.10d and 2s.6d.

There were some excellent earnings by the Scottish steam drifters during 1902 with Peterhead boats coming out very high on the list. A few top examples were: *Lucy* (£1,000); *Thistle* (PD 390), £950; *Rose* (PD 389), £800; *Iris* (PD 402), £700; *Shamrock* (PD 397), £674; and *Petunia* (PD 396), £670.

Another boat with high earnings was *Promote* (BF 410) with £973. And, to round it off, the two Banff boats *Fame* (BF 655) and *Speedwell* (BF 713) earned £650-£700 each.

Some of the Scottish boats returned home at the end of the season with pianos and mangles stowed in the hold, bought with some of their hard-won earnings.

Others were not so fortunate! *S. D. Prosperity* (BF 649) lost three of her crew when they were washed overboard on the trip home.

A wooden steam drifter for Scottish owners slid down the ways at Fellow's Southtown yard on February 9, 1903. Her name was *Harry* (BF 1090) and a press statement said that her machinery builder, F. W.

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Buyers and auctioneers working at Yarmouth. The drifters *Lost Rodney* (left) and *Rosebay* (centre) have put ashore catches.

Yarmouth

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Carver, had fitted a new patented corrugated propeller of his own design to the vessel. On trials she was reported as covering 32 miles in three hours in a choppy sea.

Scottish boats began to put into Yarmouth towards the end of September 1903 in readiness for the coming season. Among the earliest arrivals were two interesting boats.

One was a motor drifter and the other was termed an auxiliary steam drifter. They had been sent down to Yarmouth as an experiment with a view to testing their capabilities.

At the end of the season both were said to have been successful and, over the following years, an over-increasing number of Scottish motor drifters were to be seen at Yarmouth.

Early autumn landings were poor. Herring were mazy and prices sank to 30/- to £2 per last, which would not pay for the salt used on them. Selling by the cran was not as yet general at Yarmouth and the process of 'counting' was being adhered to in most cases.

At the beginning of October, the harbour was filled to capacity with fishing vessels; they lay three to four deep on each side of the river for about 2¼ miles.

Belgium

Gluts set in towards the end of October. One Peterhead steam drifter came in with a shot of 100-cran, but her skipper could not get more than 5s. a cran. So he decided to take on bunkers and steamed to Ostend, Belgium, and got £80 for his catch.

The Yarmouth drifter *Twenty Seven* (YH 680) was in trouble at the end of October when her gear fouled that of the Wick drifter *Sister Ross* (WK 326), a boat which was to come into Yarmouth ownership in 1908. *Twenty Seven* was held to blame and £19 compensation was paid for loss of nets to the Scottish vessel.

This was a relatively common occurrence; by the end of the year there were 33 cases waiting to be heard at the County Court at one time regarding collisions and loss of gear and nets.

Towards the height of the 1904 season, scores of Scottish boats were coming in with from 70 to 120 crans of herring each. Unloading was going on right up to the Haven Bridge. Fresh herring were selling from 8d. to 1s.1d. per 100. Salted stuff reached 50s. a last; the lowest figure for years.

By the end of November, prices had risen on the wharves to 2s.3d. per 100. Overdays were fetching 1s.3d. per 100 and salted, £9 a last.

Large numbers of fifies and zulus, beside the local luggers, were still in use and among the tugs helping out at Yarmouth were *Burmah*, *Orion*, *Winchester*, *Chester* and *Southern Cross* from Hull, *Saxon* from Falmouth and the London tug *Rose*.

The number of Scottish boats working from Yarmouth had increased to 590 sail and steam by 1905, but landings for the year were slightly down at a total of 38,505 lasts.

First Scottish arrivals at Yarmouth in 1906 were *Onward* from Wick and *Lucania* of Banff. Numbers soon built up until there were 514 vessels. Included were 365 fifies and zulus.

Two weeks later, numbers had increased to 607 Scottish vessels. Many comments were made about one or two zulus which had been converted into auxiliary steam boats; they looked rather clumsy with the steam machinery but, really, this was all part of the evolution and development.

The majority of the local owners and salesmen had by now adopted the Scottish cran system and, to all intents and purposes, 'Telling' was now a thing of the past. Scottish earnings varied considerably. Peterhead sailing boats were making £100/£200 each with a maximum of £400. But some of the same port's steam drifters topped the £1,000 mark.

Bad weather hit many of the homeward bound Scottish boats. *Whitelink* of Fraserburgh went ashore near Peterhead and became a total wreck, and Aberdeen's *Glentilt* was wrecked at Eyemouth. All crew members were saved in both cases.

On October 22, 1907, some 60 million herring were discharged at Yarmouth, with the result that the market was flooded. The outcome was that large numbers of 'overdays' were taken out and thrown overboard.

One Scottish drifter came in at about 8a.m. but, because of the terrific crush along the quays, was unable to find a berth. After waiting until nearly midnight the skipper took his boat out to sea and dumped his catch.

The Port and Haven Commissioners' hopper barges took out about 60 tons of disinfected herring and dumped them off the port.

As each year progressed, the number of Scottish auxiliary motor vessels were increasing at Yarmouth. An article in *Motor Traction*, 1910, said that up to the present time about 60 zulu-type boats had been fitted with auxiliary paraffin engines of between 45 and 70bhp, many of them being of Gardner manufacture.

The first Scottish boats to come in for the 1910 season were from Aberdeen: *Holly Bank* (A268) and *Hazel Bank* (A 217). The Banff fleet suffered a loss on October 15 when the steam drifter *Mistletoe* sunk at the entrance to the Yare. A heavy sea was running at the time and, as she came in, she struck the ground, swung round and the seas rapidly poured down the hatchways and hold. Eight out of her crew of nine were rescued.

Horses

On September 28, 1911, the steamer *Norwood* arrived from Aberdeen loaded with 71 passengers, mostly Scottish hoopers and carters; 66 horses and lorries for fish carting, together with 15 tons of hay for the animals. There were only a few girls on board as most still preferred to come down by train.

Norwood made a second trip the following month: this time she discharged more lorries, barrels, a few more passengers and 24 horses. Four of the animals died on the way and were said to have been seasick on the journey. Whether this could have been due to insufficient ventilation in the holds is open to speculation.

The 1912 season started

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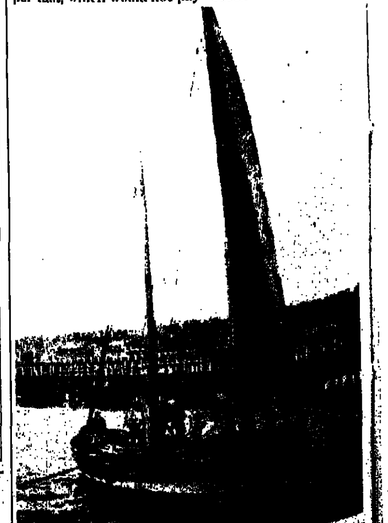

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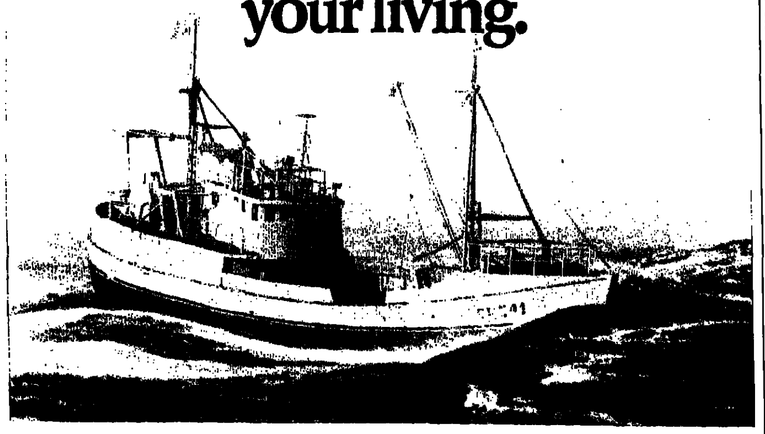

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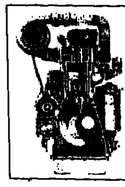

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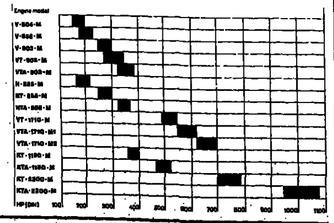

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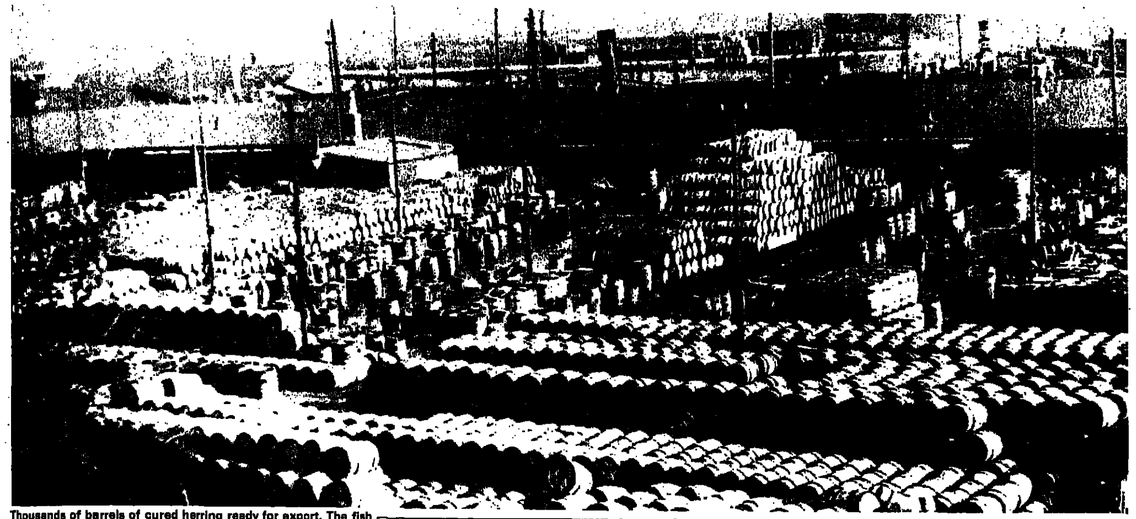

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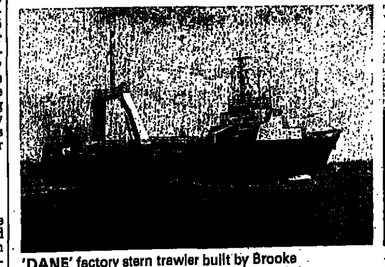

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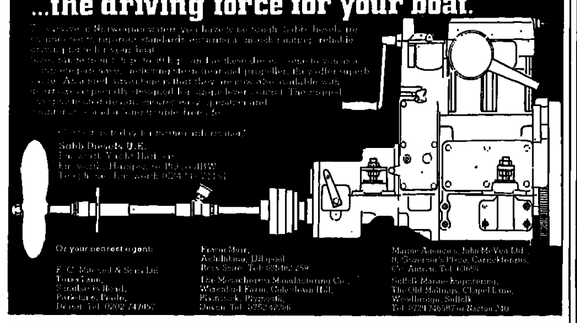

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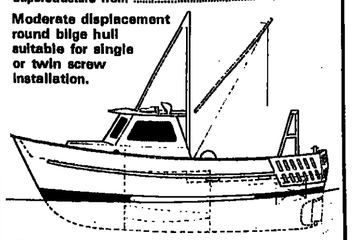

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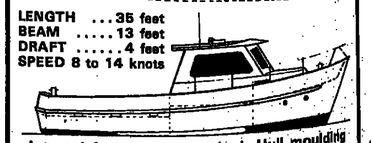

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about two weeks earlier than usual and several reasons were advanced to explain the excellent fishing that followed. One was the fine weather which lasted almost without a break from the end of September until the second week of November. Another was the location of the herring which was found comparatively near the port.

With the shoals only 10 to 15 miles to the east, drifters were able to land their catches quite early in the day and get away again quickly. It was not unusual for drifters to have landed their catches and left again for the fishing grounds by 10 or 11a.m. In some cases boats returned to port with another catch of herring on the same day.

Towards the end of the season *SS Norwood* left for Aberdeen with 60 horses, 1,200 nets, 1,000 barrels of pickles, a number of bicycles, typewriters, mangles and about 100 passengers. Fifies and zulus were now in the minority at Yarmouth, only 86 of these craft were operating.

Much has been written about the wonderful 1913 season at Yarmouth in which 742 Scottish registered boats took part. A total of 824,213 crans of herring were landed at Yarmouth.

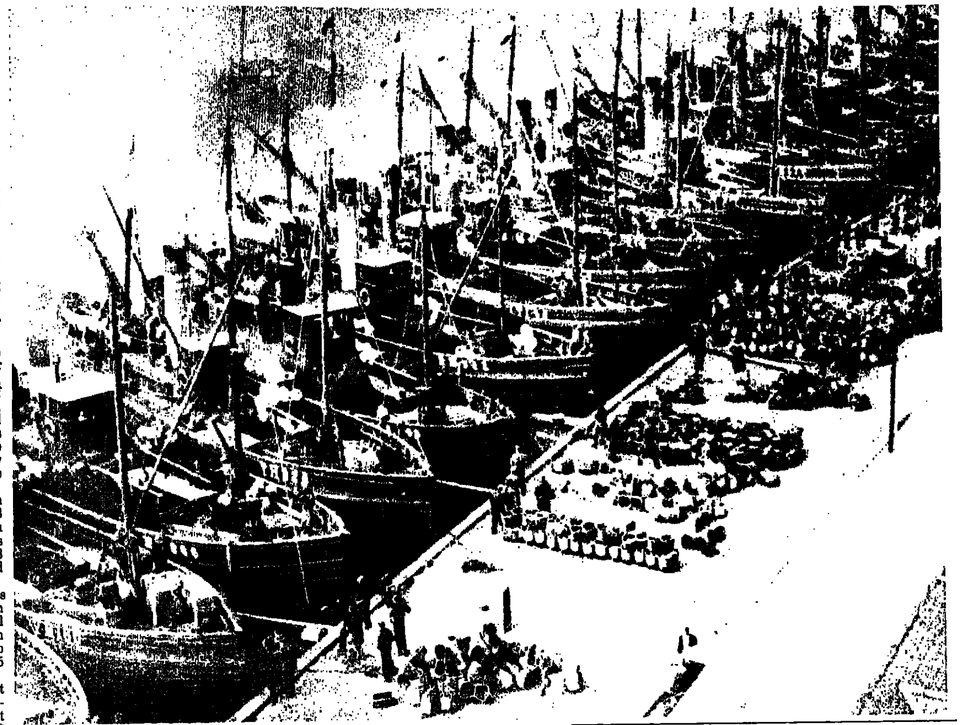
A couple of additional facts that do not seem to have been mentioned are that several boats regularly fished from Lowestoft and delivered to Yarmouth, landing 2,625 crans from 30 vessels.

Against this, some that regularly fished from Yarmouth and delivered at Lowestoft landed 19,969 crans at the Suffolk port. Also, owing to the glut of herring, numerous trips were made to Ymuiden, in Holland.

One Scottish boat, the steam drifter *White Heather* of Banff, was lost during the season. She was run down and sunk whilst she was shooting her nets by the Shields vessel *Northumbria*. Luckily, this was without any loss of life to her crew.

The first Scottish drifter to put into the Yare during the first wartime season of 1914 was *Christina Craig* (BK 271). She was one of the seven drifters to be sunk on the night of February 14, 1918, in the Dover Strait, when the net drifters were savagely mauled by German naval forces.

One of the best landings made during this season was the 101 crans of 'overdays' discharged by the Berwick drifter *Faithful*, fetching £278 at auction. There were only 72 Scottish boats operating from Yarmouth that year.



Part of the drifter fleet at Yarmouth pictured soon after 1932. Left to right are: YH 180 *Ocean Trust* (owned by Bloomfields), PD 266 *Monarda* (A. P. Duthie), YH 325 *Ocean Pilot* (Bloomfields), INS 545 *The Provost* (D. McKenzie), FR 311 *Morning Rays* (A. Tait), LT 145 *Silver Prince* (E. T. Cappa), YH 359 *Girl Ellen* (A. W. Godbold), WY 14 *Wyeburn* (R. Milburn), YH 757 *Violet & Rose* (R. & J. L. Balls), YH 579 *Cheerio Lads* (E. A. Baker), YH 971 *Rose* (F. H. Haylett), FR 17 *M. H. Stephen* (R. D. Stephen) and PD 39 *Green Pastures* (G. Buchan).

Yarmouth

During the peak period of the 1916 season, there were 150 Scottish drifters operating from Yarmouth.

It was announced in September 1916 that there would be no autumn fishing at Yarmouth but, in fact, there were 59 boats engaged and they landed 12,289 crans of herring. By this time very large numbers of steam drifters had been requisitioned by the Admiralty, but the 1917 season saw 200 Scottish boats at Yarmouth, although all North Sea fishing was now under the control of the Admiralty.

The cream of the Scottish drifter fleet now working with the Royal Navy rendered valiant service during the war years, with exploits in the Dover Strait, North Sea and in the Mediterranean.

The autumn of 1918 saw the surprising number of 291 Scottish boats working from Yarmouth, no less than 210 of them being motor-powered.

On November 19, 1919, *Ocean Crest II* (YH 29) had her stern blown away when she struck a mine on the grounds. Her skipper-owner, William Shreeve, and the hawseman were killed.

The Wick fishing fleet suffered a loss on October 14, 1920, when the wooden steam drifter *Fidelia* (WK 563) came into collision with the iron-hulled *Oceanic* (FR 220). The wooden-hulled vessel went down in three minutes, her crew of nine being taken on board *Oceanic*.

A further loss came during the following year when *Scottish Chief* (BCK 79) was working about three miles from the Smith's Knoll light vessel and sprang a leak. Her three pumps were unable to cope with the inflow of water and she sank very soon afterwards, her crew being taken off by the Buckie drifter *Diligence*.

The majority of the Scottish fleet had left Yarmouth

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Buckie's *Campania* (BCK 98) leads the fleet into Yarmouth. The drift nets are seen stowed forward.

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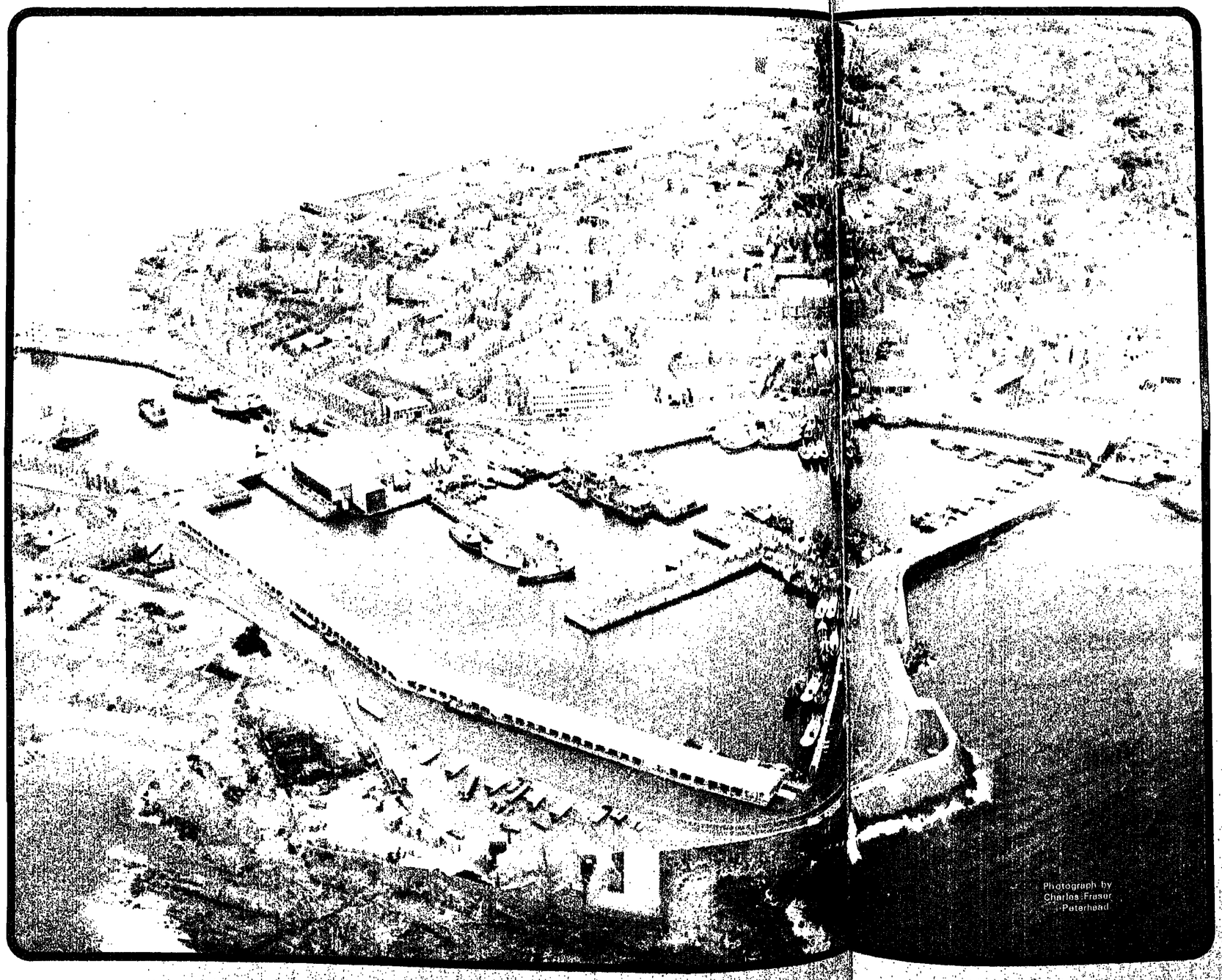

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Fisher-girls following the herring down from Scotland pose for the camera. The salt made their hand wounds sting.

Yarmouth

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for home by the end of the first week in December 1921. On December 5, the Fraserburgh M.D. *Jeanie Noble* (FR 866) was on her way home back to Scotland when her skipper noted the colour of the water and decided to shoot some nets and was rewarded with a catch of 80 crans. These were brought back to Yarmouth.

She left again for home on the 7th, and for the second time nets were shot in the same area, this time bringing in 40 crans.

A third departure for home was made on the ninth, and her skipper and crew could not resist the temptation whilst passing the Buisboro' grounds and, sensing that there were still plenty of herring about, came back to Yarmouth with 50 crans.

I never found out whether the crew got back to Scotland in time for Hogmanay!

The Home Fishing season of 1922 was under a cloud, not only because of the poor fishing, but over the loss of four Scottish steam drifters: *David B. Summers* (PD 20), *Cordelia* (PD 261), *Golden Feather* (BF 614) and *Enterprise* (BF 366). Amazingly, no lives were lost.

Competition at sea was equally hot ashore. Following many arguments along the fish wharf at Yarmouth, the manager of W. S. Sinter and Son, herring curers of Gorleston, decided to check a Scots lassie in 1923 to ascertain how many herring could be gutted in one minute. It was established that 57 herring per minute had been gutted — a fantastic work rate.

On the last day of October, S.D. *Vintage* (BCK 380) was found to be leaking near Hammond's Knoll; the nearby S.D. *Veteran* (PD 560) went to her assistance and took off the crew of nine. The Buckie boat foundered shortly afterwards.

A further loss to the Scottish fleet came a few days later, when the S.D. *Faithful* (BK 246) was struck amidships in the Yare by the steam trawler *Audrey* (YH 215) and sunk with no loss of life.

Both *Faithful* and her skipper were well-known at Yarmouth. It was the custom of Skipper Collins to give each year the proceeds of his last catch of fish to the Yarmouth General Hospital, an example of the generosity and kindness shown by Scottish fishermen to those in need.

A surprising number of Scottish boats turned up at Yarmouth for the 1924 season, 720, although the industry was in a gradual state of decline. Several of the Scottish boats left during the third week in October for the Moray Firth, where herring shoals had been located unexpectedly.

In the first week of the 1930 season, more than 20 fish workers' expresses arrived at Beach Station, Yarmouth, from Aberdeen and the various fishing centres that stud the shores of the Moray Firth and, also, from the Western Isles.

Six of these special trains steamed in on one day alone with about 2,000 fisher-girls, coopers and labourers to work on the fish wharf and in its vicinity until December.

One long train was entirely filled with girls from Stornoway, who travelled via the Kyles of Lochalsh, and more from the same district were in other special trains. Some had 11 coaches, in addition to luggage vans, and stretched yards beyond the ends of the platforms. Many of the girls had travelled twice round the clock.

One of the best days at Yarmouth in 1930 was November 6, when some 450 drifters discharged 31,215 crans. Boats were coming in a steady stream up the Yare all day. It was a day such as this that vindicated Yarmouth's title of the premier herring port. This was the Scottish fleet's best Yarmouth season since 1924.

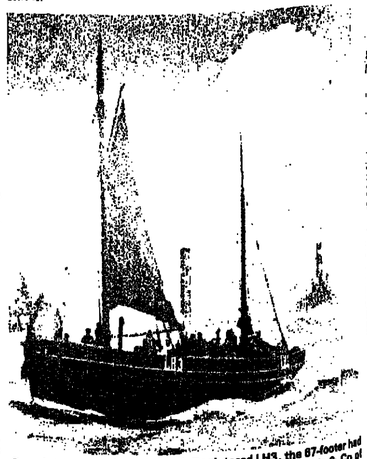
There was a big change in the situation by 1932. A fleet of 528 Scottish boats were based at Yarmouth and landings for the year came to 279,230 crans, a huge decrease on the previous year.

The season got off to a slow start in 1933, with the discovery of large patches of floating organisms, known to fishermen as 'weedy water.'

Research work carried out by the Ministry of Agriculture and Fisheries found two species of marine algae were involved. One of these is known as definitely distasteful to herring and, thus, had prevented their visit to the usual grounds.

One patch about 30 miles wide extended from the Swarte Bank to the neighbourhood of the Outer Dowsing L.V. at all depths. There was also another small patch round the Smith's

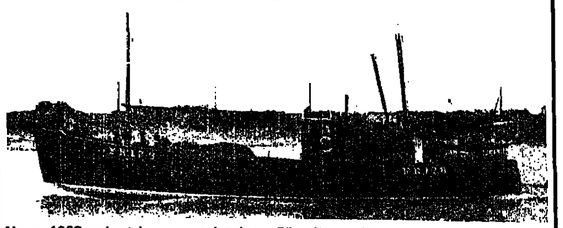
Turn to page 57



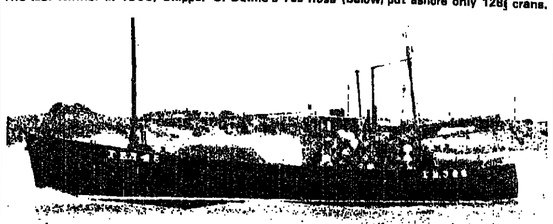
Resolute steams in under sail. Registered LH3, the 67-footer had a beam of just 17.5 ft. She was built by J. Mackenzie & Co of Leith in 1886.

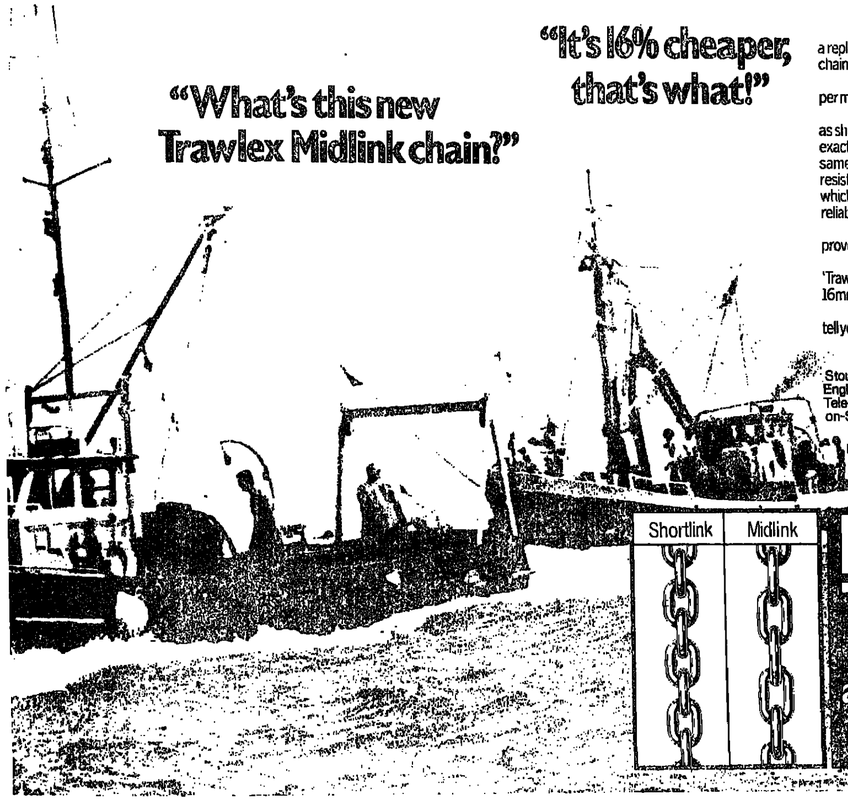
Above: *Star of Bethlehem*, skippered by G. Forman, took the Prunier Trophy in 1961 with a 303¼-cran shot. Below: the 1955 winner with 210¾ crans, Skipper G. Duncan's *Morning Star*.

Four Prunier Trophy boats



Above: 1960 and catches are coming down. *Silver Harvest* (Sk. J. Cardno) had 187½ crans. The last winner in 1966, Skipper C. Duthie's *Tes Rose* (below) put ashore only 128¼ crans.





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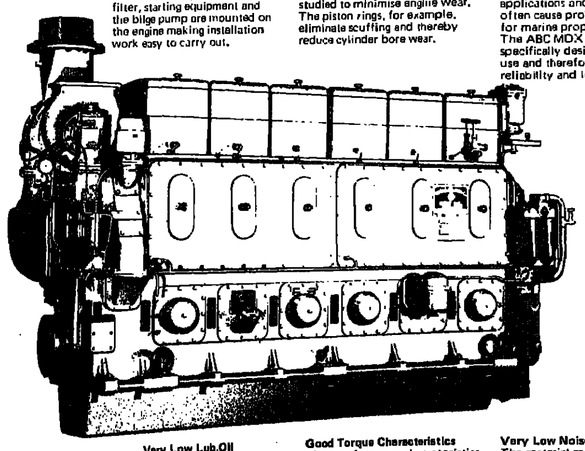

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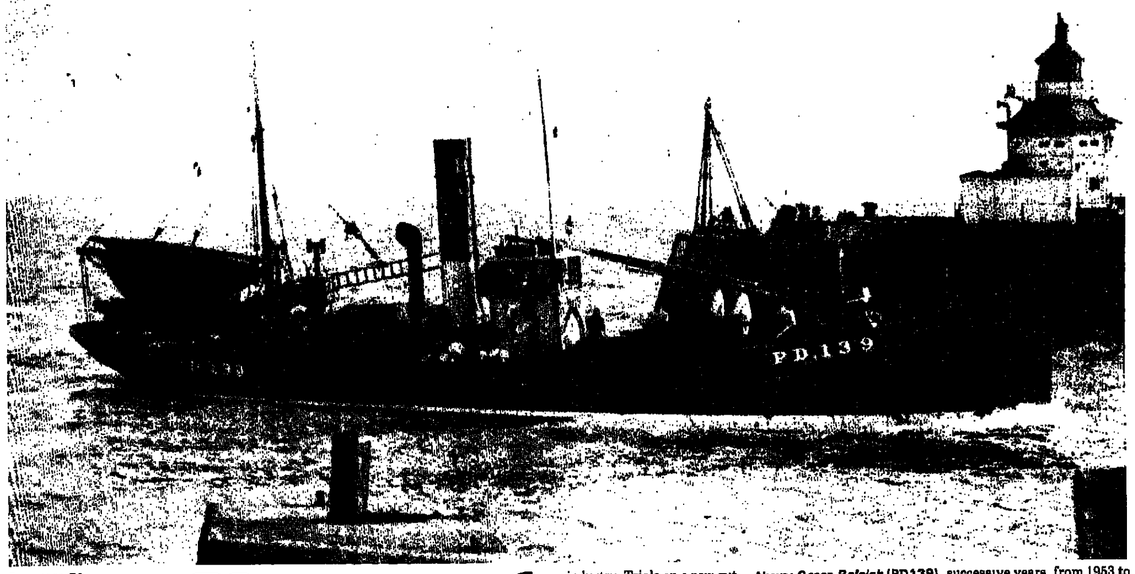


Above: *Ocean Raleigh* (PD139) was an ex-Admiralty drifter built by A. Hall & Co. at Aberdeen in 1918. Her crew are still at the nets.

From page 54

Yarmouth

Knoll L.V., with a further area 25 miles in diameter near the South West Bight of the Dogger Bank.

To stimulate interest and promote the sales of herring, the Prunier Trophy competition was introduced in 1936. Sponsored by Madame Simone Prunier, a London fish restaurant owner, all drifters (steam and motor) engaged in the Home Fishing were eligible to compete.

Scotland got first grip on the trophy when *Boy Andrew* (BF 592), under Skipper J. Mair, made a fine shot of 231 crans worth 29s.3d. a cran at auction. The runner-up was the Yarmouth vessel *Frons Olivae* (YH 217) with a paying shot of 225 crans.

On November 18, 1937, the solitary drifter *Ocean Angler* (KY 208) was the only boat to land a catch of herring at Yarmouth.

On the previous Tuesday there were big landings and herring were dumped. The skipper of *Ocean Angler* heard of this on the wireless whilst at sea, thought things out and dumped the catch of 40 crans he had aboard.

He stayed at sea and shot his nets on the next night while the majority of the fleet were in harbour. His catch was 90 crans and he returned to Yarmouth when the market was empty. They fetched the greatly increased price of from 40s. to 45s. a cran — nearly £200 for his night's work.

Ordinarily, the money would have been shared between him and his crew, but under the existing arrangements in force, the money went into the common pool and the *Ocean Angler* got just over £60.

By the end of Second World War a start was made on mechanising the herring industry. Trials on a new gutting machine were held at Yarmouth in November 1945. It was the invention of three Fraserburgh engineers, George Walker, John Duncan and James Michie.

Weighing nearly 15cwt., the machine was operated by two people and had moulds to take 120 herring at a time. It was estimated that 90 herring could be cleaned a minute. Price of the complete machine was between £350/£400.

By 1948 the Scottish visitors had tailed off with only 191 steam and 113 motor drifters working from the port. Truly the days of the steam drifter were numbered!

The first post-war Scottish Prunier Trophy winner came in 1951, when the Peterhead M.D. *Star Of Bethlehem* (PD 218), under Skipper George Forman, landed a shot of 303¼ crans at Yarmouth caught 19 miles ESE of the South Leman Buoy. It took her crew 18 hours to bring all the nets in.

Scottish boats were to win the Prunier award for five successive years, from 1953 to 1957.

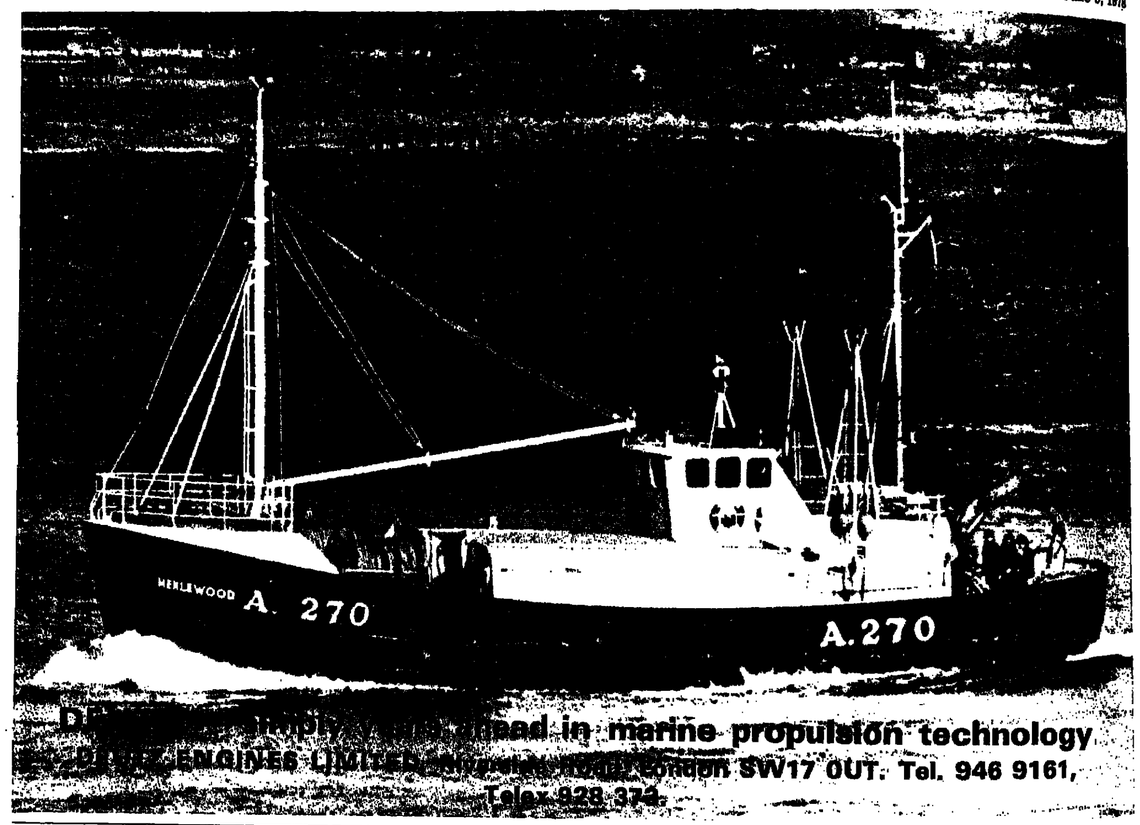
The green-hulled *Fruitful Bough* (PD 417), under Skipper Peter Forman, had a shot of 323¼ crans in 1953. It took nearly 15 hours to haul in her nets.

MD *Jessie Sinclair* (LK 509, under Skipper Robert Williamson, had 272 crans in 1954. It was landed at Lowestoft on the opening day of the competition.

M.D. *Morning Star* (PD 234), under Skipper G. Duncan, had 210¼ crans in 1955. MD. *Stephens* (FR 156) under Skipper F. Stephens in 1956 had 215 crans. She shared the honours that year with the good-looking

Turn to page 59

Pittendrum (FR544) enters Yarmouth followed by a whole stream of fellow Scots. The quay is a vantage point to spot the fleet coming in.



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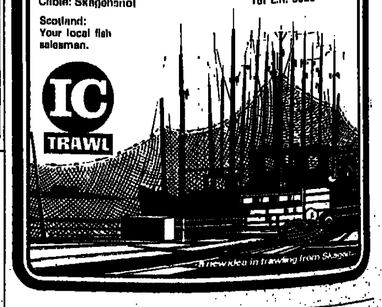

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Yarmouth

From page 57

Lowestoft drifter *Silver Crest* (LT 46); each boat held the trophy for six months.

In 1957 M.D. *Silver Chord* (KY 124) proved a winner under Skipper James Muir with 212¼ crans, taken about 68 miles from the Corton L.V. on the night of November 13/14. Skipper James Muir was previously in command of the last Scottish steam drifter to work out of Yarmouth in 1956, the well-remembered *Coriedalis* (KY 21).

This grand old lady was built in 1918 by John Duthie at Aberdeen with the name *Dusk*. It was good to see her name in the Scottish landings at Yarmouth in 1956 — she came in on October 20 with a shot of 160 crans.

History was made at Yarmouth in 1957 when M.D. *Incentive* (FR 143) returned from the Smith's Knoll grounds with a live herring swimming in a barrel on her deck.

Incentive's crew, including veterans with many years of experience of herring fishing, said they had never heard of a live herring being brought back to port. Other fishermen, with up to a half-century's experience, agreed. They recalled failed efforts made by fishermen both from English and Scottish ports to catch a herring and get it ashore alive.

Incentive's herring was full of life, however, and was swimming in the barrel on deck while her crew unloaded the 35 crans they had caught during the night 25 miles from Yarmouth.

The feat of bringing back the herring alive was an accident. The barrel belonged to one of the crew and he was hoping to cure herring in it. As it was a new barrel. He had filled it with salt water to help seal it and it was on deck while the crew were hauling. Skipper Dan Patience said: "The herring must have flown out of the net and landed in the barrel while we were hauling".

The Fraserburgh fleet supplied the Prunier Trophy winner in 1960, with M.D. *Silver Harvest* (FR 178) under Skipper J. Cardno making a shot of 187¼ crans. The final winner of the trophy was another Fraserburgh vessel, M.D. *Tea Rose* (FR 346).

Under Skipper C. Duthie in 1966, she landed a shot of 128¼ crans. No further awards for the trophy were to be made and the present resting place of the trophy is in the Cottage Museum at the Sparrow's Nest, Lowestoft. It is treasured along with many other interesting relics of a bygone era.

Following the gradual disappearance of herring from their traditional grounds each autumn, the Scottish boats became fewer and fewer, and landings became smaller, until the point was reached when it was just not economic for the Scottish boats to come this far south for herring.

In 1970, the figure quoted by the Port and Haven authorities came to only 71 crans of herring being landed at Yarmouth. Since that date, no more landings were officially recorded at Yarmouth, which brings us to the end of a most interesting part of the history of the fisheries at Yarmouth.

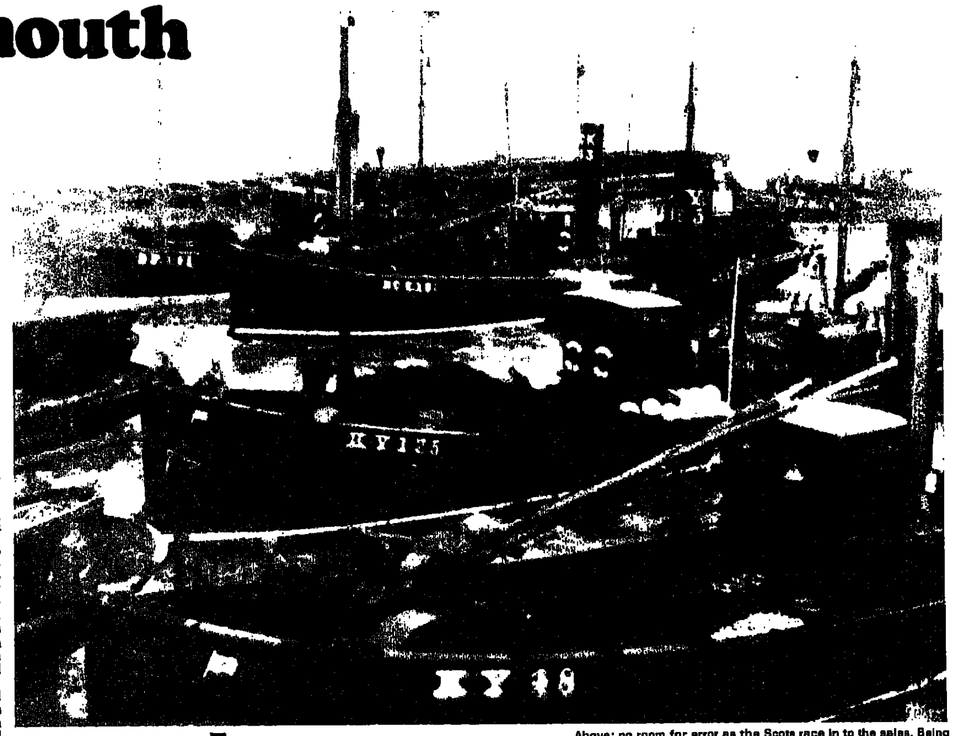
Many tides have ebbed and flowed over the Yarmouth Bar since the last Scottish drifter discharged her 'shot' at the port.

Without the Scottish visitors Yarmouth is that much the poorer and has lost much of its character. But vivid and pleasant memories are still retained by the town's elder fraternity.

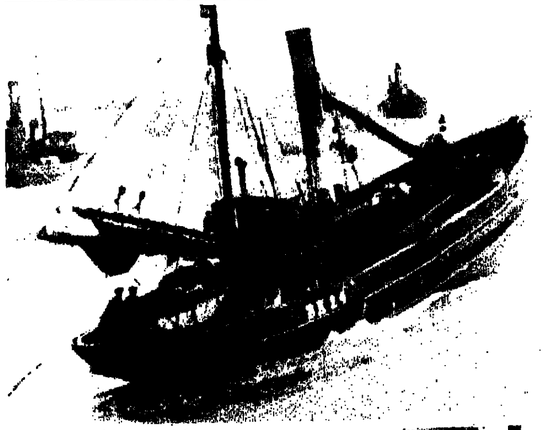
Of the ever-cheerful Scottish fisher-girls — some of them no longer girls by right of age — working in crews of three, the speed and dexterity at which they worked was amazing. For hour after hour they would toil, working by the light of paraffin gooseneck flares, irrespective of the weather.

To see these same winsome lassies around the town on Sunday afternoons, all smartly dressed — many still busy with their knitting — it did not seem possible that they were the same girls one would have seen on the pickling plots and farlanes during the working week.

Thoughts of the hundreds of Scottish steam and motor drifters in their widely varying colour schemes steaming out of the Yare on a Monday morning, as the local boats were returning after their weekend on the grounds, are still fresh in the memory of many East Anglians.



Above: no room for error as the Scots race in to the sales. Being first or last made a big difference to the crew's pay.



Left: *Boy Archie* (BK24) was one of the early steam drifters — the craft has her funnel ahead of the wheelhouse! She was built at Lowestoft in 1901.

Landing was by basket. This catch is coming ashore from a Buckie drifter.

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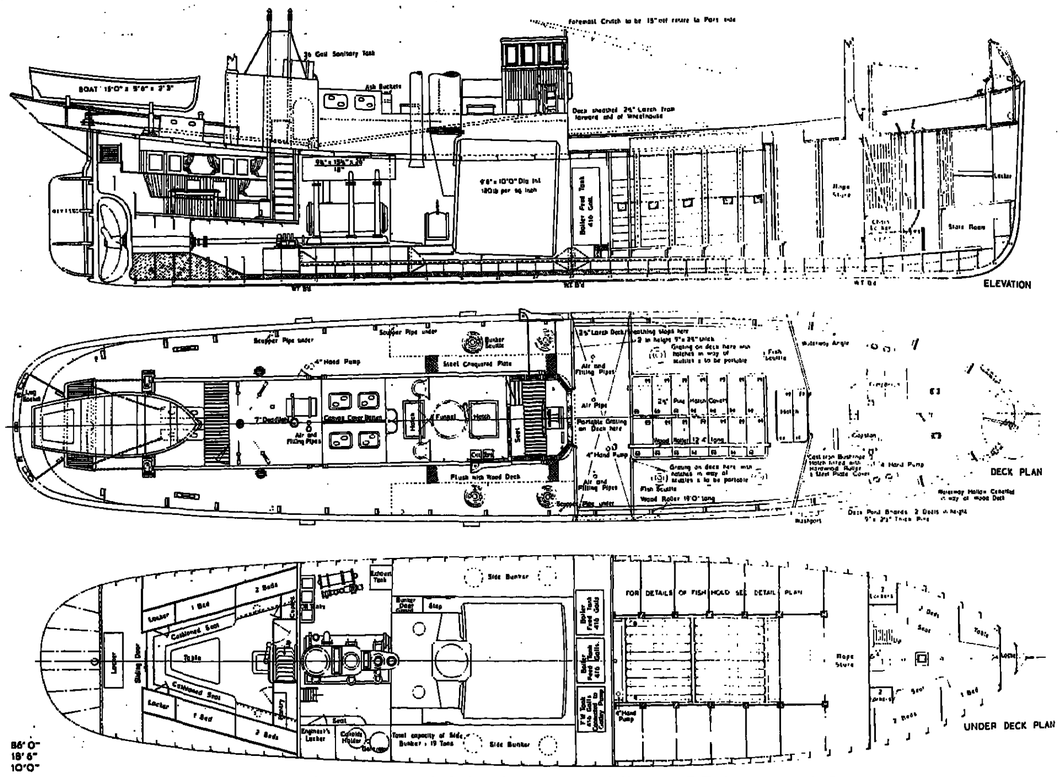

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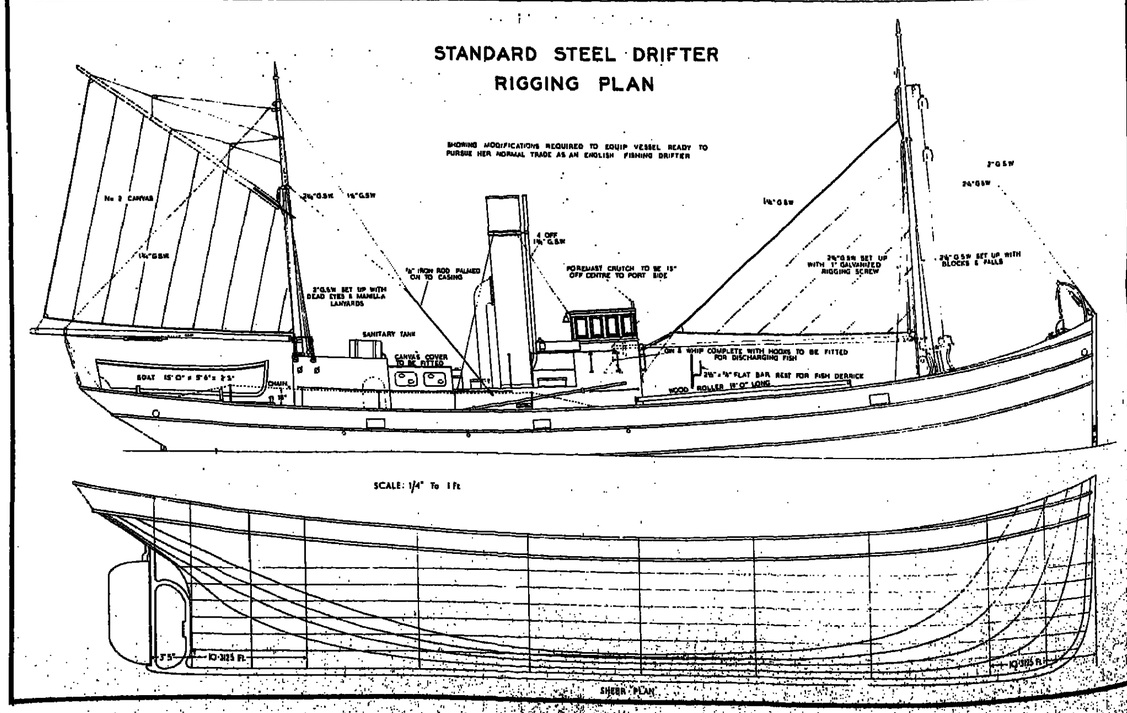
Yarmouth

Skippers ordering drifters late in 1918 pored over those drawings. They were based on Admiralty boats and had to be modified for drifting. These blueprints were prepared at A. Hall & Co. Ltd. at Aberdeen in December 1918. Length was 86 ft., moulded breadth, 18 ft. 6 in., and depth moulded, 10 ft. A Hall-built drifter of the period is pictured on page 57.



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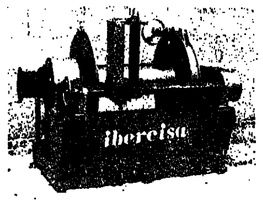

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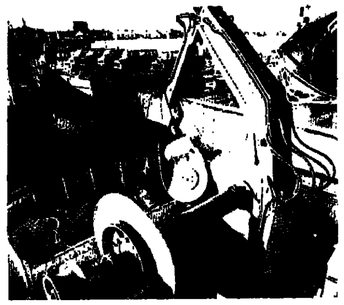

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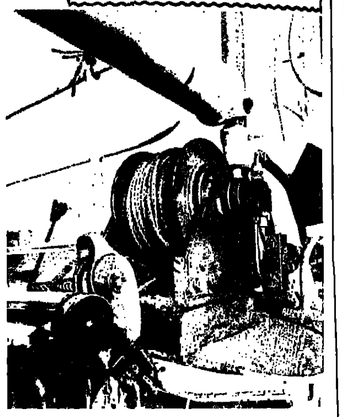

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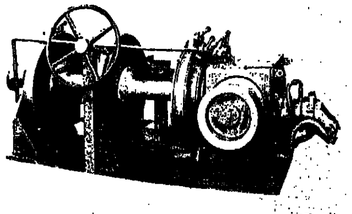

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Sold purse seiner

THE FIRST steel purse seiner to be built in Scotland has now left the Peterhead fleet. She is the 90 ft. steel vessel *Responsive* (right) which was built as the purse seiner *Claben* in 1968 for Skipper Jimmy Lovie. He later came ashore to take up the post of chief executive of the Scottish Fishermen's Association.

A product of the Renfrew yard of Hugh McLean and Sons, she later switched to fly-dragging seining for white fish.

In 1976 she was bought by Skipper J. S. Nicol and partners and was renamed *Responsive*.

Now she has been sold to Orkney skipper, Angus Sinclair, but it is understood she will continue to land her catches at either Peterhead or Aberdeen.

Boats on the move at PETERHEAD

Below: *Benvolio* prepares to set off on her first fishing trip under her new owner, Skipper Peter Ritchie. The boat, with her partner *Lorenzo*, landed 717 boxes after a seven-day trip pair trawling.

BACK WHERE THEY STARTED FROM!

AT THE END of May Peterhead's fishing fleet numbered 103 vessels over 35 ft. long.

More than 50 new boats have been built in the 1970s for the port and almost all these newer units are in the 75 to 90 ft. range with steel taking preference over wood.

Now getting into the swing of working from their new home are the 87 ft. Tynedraft-designed sisterships *Benvolio* abd *Lorenzo*, bought from Fleetwood by skippers Peter Ritchie and Arthur Buchan.

They are pair trawling for white fish together and made an encouraging start when, on May 2, they landed 717 boxes after a seven-day trip.

Both vessels have a complicated history as they were caught up in the bankruptcy of two shipyards — and they also changed hands before they were even completed! The saga of these two boats has now turned full circle.

They were originally ordered from the Tyneside yard of Ryton Marine for Peterhead skippers, in association with Caley Fisheries Group Ltd. Following the bankruptcy of this yard the order was passed on to the Berwick yard of Intrepid Marine International.

Early in 1975 the Berwick yard went bankrupt and was taken over by Caley's parent company, Associated Fisheries Ltd., so that the boats could be completed.

While the vessels were under construction the Peterhead skippers pulled out of the venture and sold their interests in the boats to Caley.

Then, Caley transferred the boats to Associated Fisheries which passed them on to its division, British United Trawlers (Grimsby) Ltd. BUT finally allocated them to Fleetwood to work under the management of Wyre Trawlers Ltd.

The builders, by then renamed Tweed Shipyard (Berwick) Ltd., completed *Benvolio* in 1976 and *Lorenzo* was delivered the following year.

Both vessels were, however, completed to a high standard of craftsmanship and finish. The two vessels have trawled for mackerel and white fish under their Fleetwood managers, but were sold as a result of Wyre Trawlers pulling out from Fleetwood.

So, in the end, they have come to Peterhead as originally intended. They are agented by Caley which now operates under the name of Caley Fisheries (Peterhead) Ltd.

Each vessel is powered by a Mirrlees Blackstone 750 hp engine and deck machinery includes Robertson winches and net drum, plus a Rapp power block.

Lorenzo moves across Peterhead harbour to lock-up for her first trip from Peterhead. She is now owned by Skipper Arthur Buchan.

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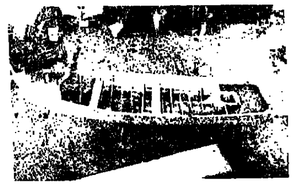

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OLDER BOATS BEST FOR STARTERS

THE SPOTLIGHT is usually on the newer boats in the Peterhead fleet, but there are older vessels still fishing successfully.

The few put up for sale during recent months have quickly found buyers as this older class of boat is ideal for the younger man starting out as a skipper.

Two young men — George Milne and Stephen Campbell — have bought the 75 ft. *Ocean Gain* which is the second oldest vessel in the Peterhead registry.

She is Skipper Milne's first command and her new owners say that, considering her age, she is in good condition.

The four-man crew of *Ocean Gain* are (left to right): Skipper George Milne, Edmond Gilmartin, Stephen Campbell and his father, Mr. W. Campbell.

Typical

Built by Richard Irvin and Sons at Peterhead in 1946, she is a typical example of the rather fine-lined, cruiser-sterned, wooden boats which came from the yard in the early post war years. She has a beam of 19.3 ft.

Ocean Gain is powered by a Gardner engine of 152 hp and equipped with a Northern Tool and Gear winch plus Rapp power block.

Ocean Gain passed her Department of Trade safety survey in 1977 and, following her change of ownership, has joined in the North Sea shrimp fishery.

Other vessels changing hands recently include *Ugievale II* and *Illustrious*, whose former skippers Arthur Buchan and Peter Ritchie have bought the 86 ft. steel boats *Lorenzo* and *Benvolio*.

Illustrious has been bought by Skipper George Strachan, formerly a crew member of the Peterhead boat *Glenugie III*. The 98 ft. *Illustrious* is one of the largest wooden vessels in the Scottish fleet and has a rather interesting history.

She was built in Norway during 1949 as the purse seiner *Brothers Seiric* and was later bought by Shetland owners who renamed her *Adalla*.

She had been tied up in Peterhead for a number of years until 1972, when she was bought by Skipper Ritchie who gave her the name of *Illustrious* and fitted her out for fly-dragging seining.

Her original 260 hp Alpha propulsion engine was replaced by a larger Alpha unit of 500 hp and she was fitted with a Norwinch seine net winch and Rapp power block. More recently she was re-fitted with Lossie Hydraulics rope reels and a deck shelter.

'Big Five'

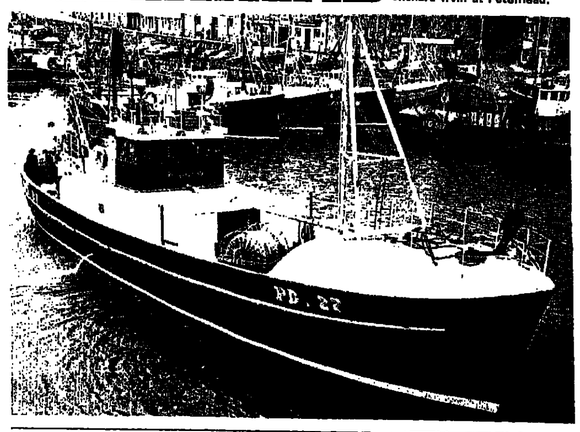
Skipper Arthur Buchan's boat *Ugievale II* has been sold away from Peterhead. She has been bought by a Burghead partnership of fishermen, in association with Arthur Duthie and Co. of Lossiemouth.

This 78 ft. wooden cruiser-sterned vessel was built at the Richard Irvin yard in 1968 and, for a number of years, she pair trawled for herring in the partnership of Peterhead boats which became known as the "Big Five."

During the last year or two she worked white fish and sprat pair trawls in company with the Peterhead vessel *Faithful II*. *Ugievale's* equipment includes Caterpillar 425 hp engine, Norlau winch and AF power block.

PETERHEAD

Right: the 32-year-old *Ocean Gain* which changed hands recently. She has been trawling for shrimps during the past few weeks. The boat was built by Richard Irvin at Peterhead.



Left: *Illustrious* is seen getting ready for her first trip under new ownership. At 98 ft. she is one of the biggest wooden boats in the Scottish fleet.

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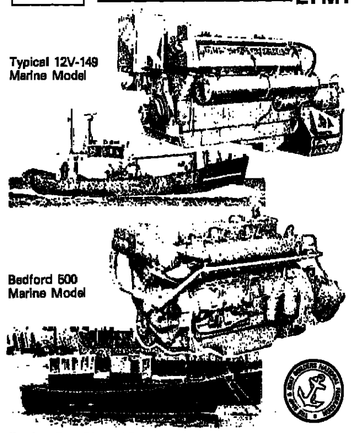

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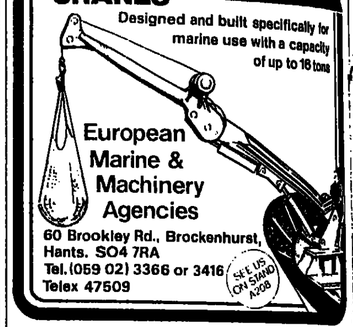

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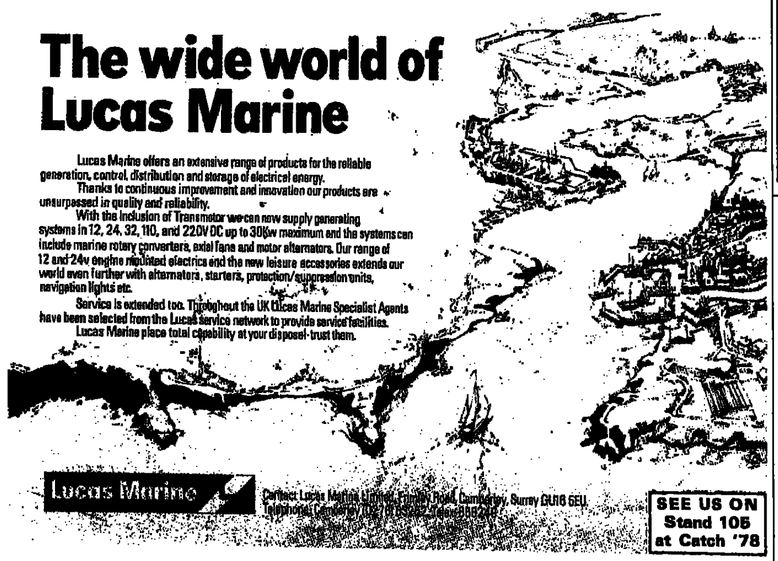

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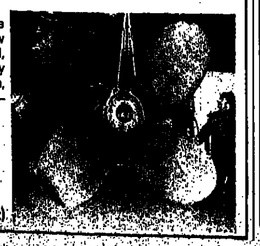

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'PAIR' SKIPPER BUYS PETERHEAD PURSER

EARLY IN the year the 126 ft. purse seiner *Quo Vadis* was bought by Skipper George Collin and she is going on North Sea sprat or mackerel fishing.

Skipper Collin and his partners had been looking around for a good secondhand purser for several years and visited a number of vessels in Norway and Denmark without finding exactly what they wanted.

They were delighted when they were able to buy *Quo Vadis* from the McAllnden family of Northern Ireland, which is having a larger vessel built.

Some of Skipper McAllnden's crew stayed aboard the vessel during the Cornish mackerel fishing for a few weeks to help the Peterhead men get to grips with the purse seining technique.

Skipper Collin formerly fished with the 79 ft. cruiser sterned, wooden-hulled, *Starcrest* which was built at the Richard Irvin yard, Peterhead, in 1971.

For a number of years *Starcrest* was chiefly herring pair trawling and then, last summer, she worked the white fish pair trawl in partnership with the 86 ft. steel vessel *Shemara*.

Starcrest has now been sold to Peterhead skipper, Mitchell Hughes, and has been re-named *Palmyra*.

Quo Vadis, built by Vaagland Batbyggeri of Norway in 1972, is powered by a Mirrlees Blackstone 800 hp engine and equipped with Brattvaag winches, Triplex net winch, Brunvoll side thrusters and Simrad and Wesmar sonar sets.

Her original chilled seawater tanks were later fitted with a Bolsones refrigerated seawater plant.

After her arrival in Peterhead after the close down of the south-west mackerel fishing, *Quo Vadis* was taken to Aberdeen where her red hull was repainted blue, a favourite colour in the Peterhead fleet. She has also been fitted with a new Wesmar SS230 sonar.

Right: *Quo Vadis* seen shortly after her arrival in Peterhead under new owners. She has now been painted light blue — a favourite colour in the local fleet — and is to work both sprat and mackerel.

Noble's building guide

THE *Scottish Inshore Fishing Vessel, Design, Construction and Repair* (price £2.50) is the latest in the National Maritime Museum's Maritime Monographs and Reports. An illustrated paperback of 60 pages, it is written by practical boatbuilder and designer Alexander Noble, who started work on his own account in 1946.

In an introduction, the book edited Eric McKee describes the development of inshore vessels in Scotland. Next comes a selection of the different types of boats built at Noble's yard, with a picture and a description of each one.

Stages

The author then takes us through all the stages in the construction of a 56ft. boat, starting with the initial discussion between designer and owner.

In this the type of boat, equipment, mode of fishing, number in crew and instruments required are specified. The nature and number of instruments determines the size of the wheelhouse, and the change in size of wheelhouse to accommodate the various instruments now in use is mentioned. A drawing is produced, followed by a half-model.

Then comes the lofting process in all its details, followed by the construction step-by-step.

We are shown how to line-out the frames to make the best of the allotted timber; then the framing of the craft, fitting the engine-bearers, planking-up, beams and deck.

Mr. Noble mentions some of the woods now used in boat-building, including keruing and iroko, all unused by the pre-war boatyards.

The bulkheads are constructed, the hole for the stern-tube is enlarged (a pilot-hole was bored at an early stage). Tanks and engine are fitted, deck machinery, gallows, etc., installed, plus mast or masts stepped, the wheelhouse built and equipment installed.

Last comes the accommodation. In this instance there are seven bunks for a crew of six, with cupboards, seat lockers, table, stove and adjacent galley. The foc'sle is lined in plastic-faced laminate which is much easier to clean than the tongue-and-groove planking used in the past. The importance of comfortable quarters is stressed, especially in a boat working away from her home port.

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Mr. Noble says: "If man is wise, and keeps planting and looking after his forests, there need never be any shortage of timber in this or any other country which uses it for boat-building".

A final short chapter deals with the repair of wooden boats.

Mr. Noble has produced a most valuable guide to traditional construction in a readable form. The pictures have reproduced well and the writing style of this obviously practical man is clear.

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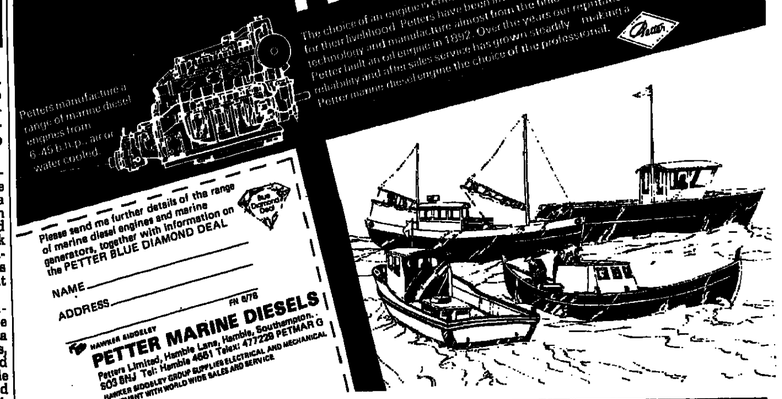

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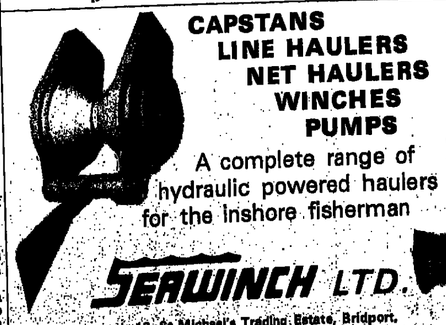

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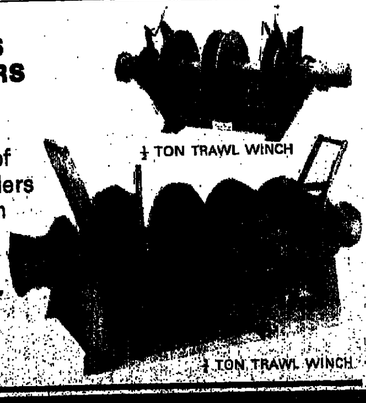

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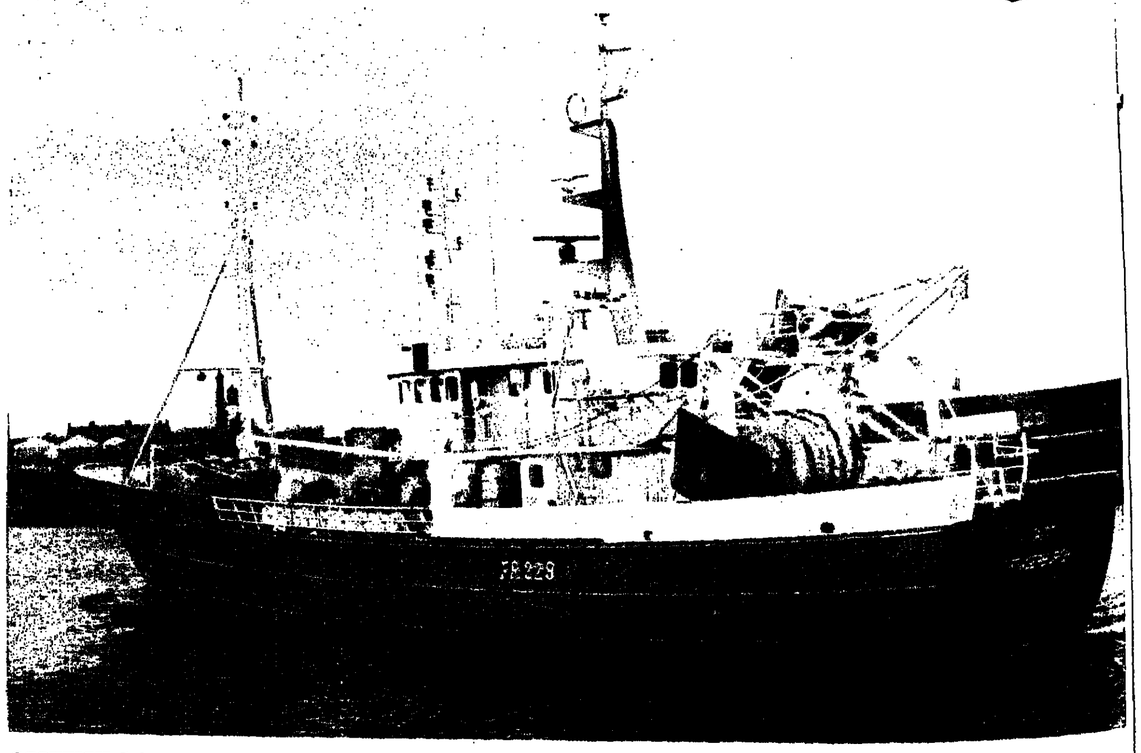
NON-STOP TAITS TAKE ON FIFTH PURSER

The 140ft. purser/trawler *Taits* arrives at her home port of Fraserburgh from her builders in Norway. She is the biggest purser built for a UK skipper and is a slightly larger version of the family's *Chris Andra*. *Taits* can carry 470 tons of fish in six refrigerated seawater tanks. She is soon to be followed by another purser for the same family.



SCOTTISH fishermen are demonstrating their confidence in the future with massive investment in new vessels despite the uncertainties facing the fishing industry. Among these go-ahead men are the Tait family of Fraserburgh who have had two new purse seiners costing some £2¼m. built in Continental shipyards this year.

What is even more remarkable is the fact that the Taits have built the vessels without financial help from Government sources. The first of these new vessels, the 140 ft. *Taits*, was delivered in April from the Norwegian yard of Karmoy Mek. Verksted of Kopervik. She is now fishing under Skipper Andrew Tait. His brother, William, will take command of the second purser nearing completion at the Maaskant shipyard, Holland.

Third Tait brother, Robert, is now in charge of the family's other purser, the 135 ft. *Chris Andra* built by Karmoy in 1975.

Now the three brothers are to work with these larger boats, their three previous commands — *Conquest*, *Challenge* and *Comrade* — have all been sold to other Scottish owners.

Talking to *Fishing News*, Skipper Andrew Tait said that providing the UK gets a

Turn to page 70

Skipper Andrew Tait aboard his new command. He started her career on the blue whiting grounds off Scotland, but the fish were too difficult for even his super-ship which is powered by a 1,300 bhp Wichmann diesel.

We congratulate the owners of the M.F.V. *TAITS* and hope she will be a "lucky ship"

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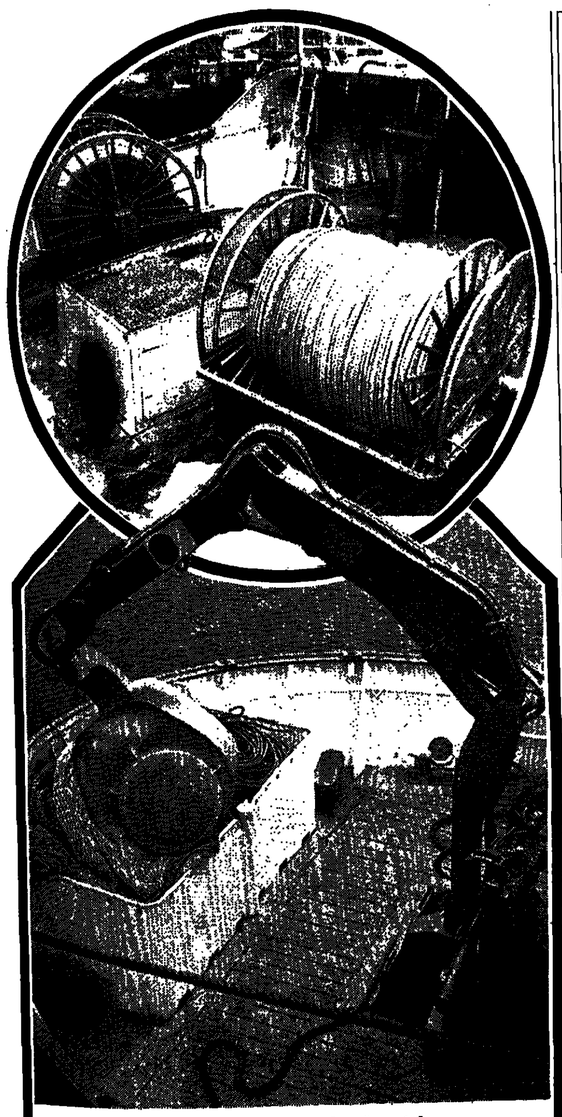

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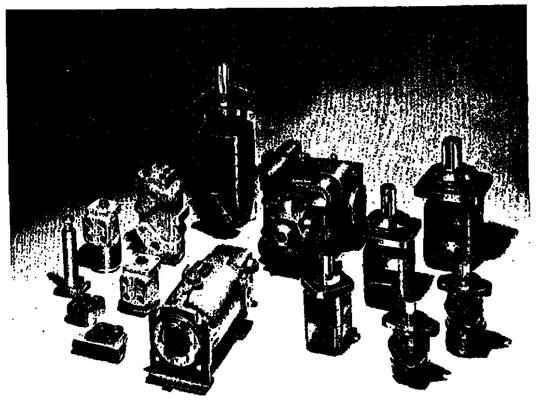

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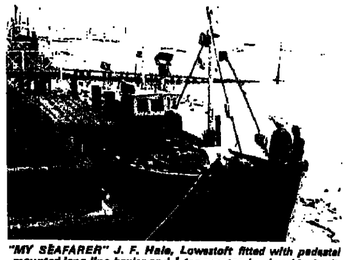

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TAITS

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reasonable agreement with its EEC partners, he was not too concerned about the future.

"Our biggest worry is that quotas are being ignored by other countries. This can only be cured if Britain gets dominant control of fish stocks in her own waters," he added.

Taits is the fifth purse seiner to be built for the Tait family. In 1968 they took delivery of the 85 ft. *Conquest* from Renfrew and, then, in the early 1970s they had the 86 ft. *Challenge* and the 89 ft. *Comrade* built in Norway and Holland respectively. So they had a boat for each brother!

Their father Skipper Andrew Tait Snr., who for many years had been one of Scotland's leading herring drift net fishermen, had by now come ashore to organise the operation of the three pursers and the maintenance of their fishing gear.

By the early 1970s, however, it was becoming obvious that vessels in the 80 to 90 ft. class were not the most efficient for purse seining.

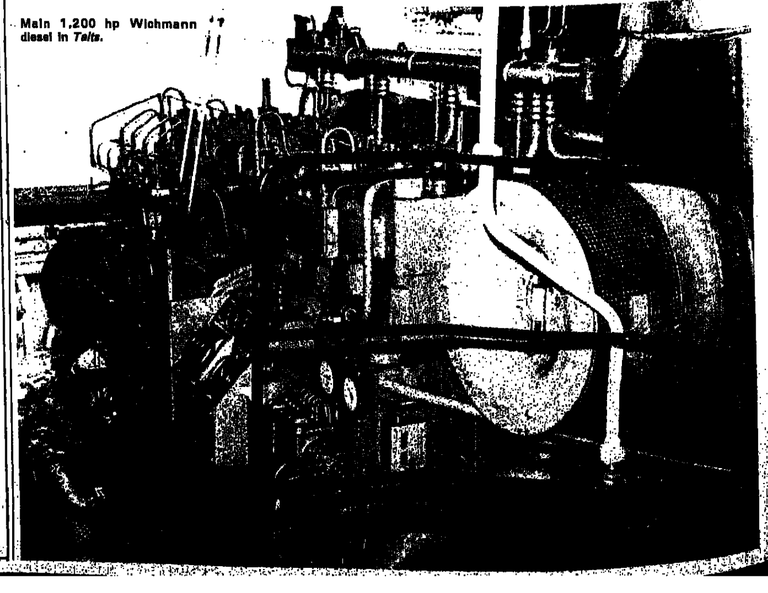
In 1974 *Challenge* was lengthened by 20 ft. and fitted with chilled seawater tanks. This work was carried out in Norway at the Karmoy shipyard.

An order was also placed with Karmoy for the design and construction of *Chris Andra* which, at the time of her delivery in 1975, was the largest and most sophisticated vessel in the British purse seine fleet.

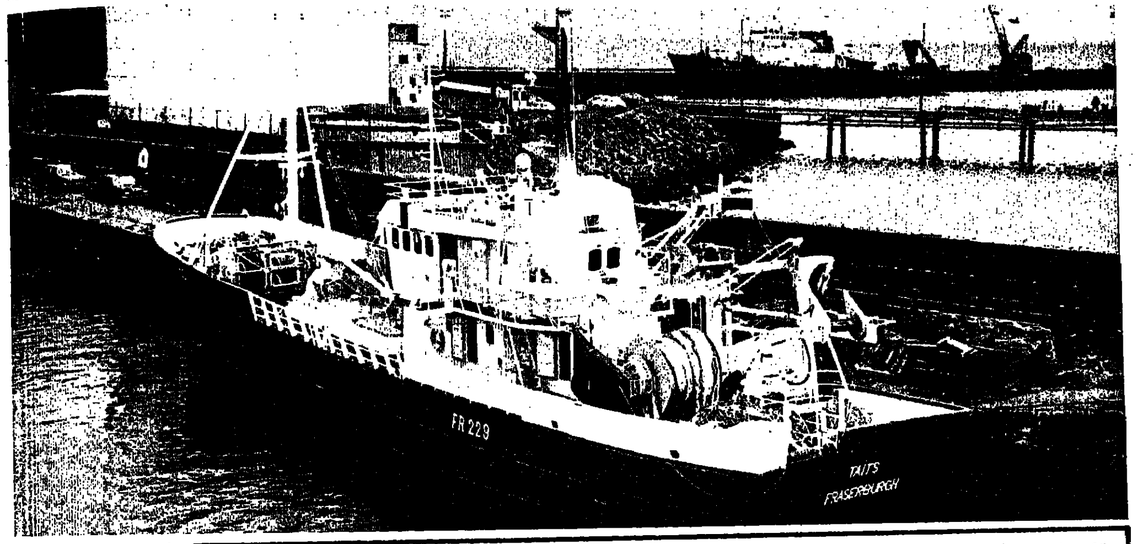
She cost some £800,000 and was built privately. Her advanced features included refrigerated seawater tanks.

Chris Andra was only the second vessel to be built by Karmoy and *Taits* is the third. The yard's previous work had been mainly based on ship repairing and engineering, in addition to handling several lengthening jobs.

Karmoy is also well-known for its gear handling machinery which is in wide use by the Norwegian and Scottish purse seine fleets.

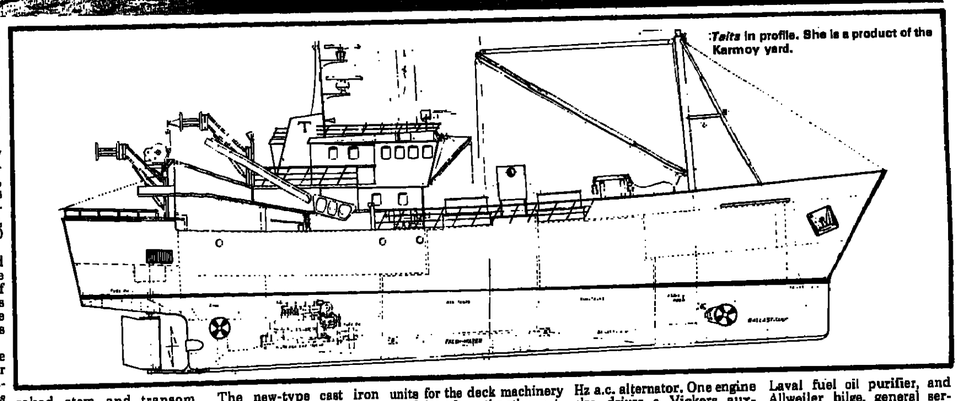


Main 1,200 hp Wichmann diesel in *Taits*.



Above: the new purser-trawler seen from the harbour control tower at Peterhead.

Left: *Taits* at Peterhead during a snowstorm as she made ready for the final leg of her delivery trip in April.



Taits in profile. She is a product of the Karmoy yard.

Taits has been wholly designed and built by Karmoy and in general design, equipment and layout is broadly similar to *Chris Andra*. She is slightly longer, with an overall length of 140 ft.

Six RSW tanks are carried up to shelterdeck level to give a fish carrying capacity of some 470 tons; the tanks aboard *Chris Andra* were only extended up as high as the main deck.

The two net bins at the stern are also slightly larger than those aboard *Chris Andra* and, in addition, *Taits* also carries a net drum for working mid-water trawls.

For trawling, *Taits* is also fitted with Simrad net sounding equipment which includes the new FH temperature readout and catch indicator.

Taits has been built to Det Norke Veritas + 1A1 Deep Sea Fishing classifications and also satisfies the latest requirements of the Department of Trade.

Main dimensions are: length bp 115 ft; beam over frames, 28 ft. 3 in; moulded depth, 13 ft. 1 in; and depth to shelterdeck, 21 ft. 2 in.

Except for the wheelhouse, aft mast, funnel and hatch covers which are of aluminium fabrication, the vessel is of all-steel construction. Design features include a full length shelterdeck with raked stem and transom stern.

On sea trials, *Taits* achieved a speed of 12.7 knots. Main power is supplied by a Wichmann 4AX four-cylinder, two-stroke diesel engine developing 1,200 bhp at 375 rpm. This is coupled by direct drive to a Wichmann controllable pitch propeller.

The engine is equipped with a Brown Boveri turbocharger and has compressed air starting.

Hydraulic pumps for gear handling machinery and side thrusters are driven from a power take-off shaft at the forward end of the engine through a Karmoy gearbox.

With one input shaft and six output shafts, the gearbox consumes up to 800 hp with a maximum torque of 1,600 kpm.

The new-type cast iron gearbox from Karmoy runs more quietly than earlier welded steel models and is more compact.

Two of the output shafts on the gearbox have a step-up ratio of 1:4.2 and drive the pumps for the Brunvoll SPO 200 side thrusters.

Four Vickers double pump units for the deck machinery are driven from the other output shafts, with a step-up ratio of 1:5.5.

Two Scania Vabis six-cylinder auxiliary engines, each giving 193 hp at 1,500 rpm, are fitted in the engine room. These provide power for a Newage Stamford 160 kVA 230 V, three-phase, 50 Hz a.c. alternator. One engine also drives a Vickers auxiliary pump unit for the deck machinery through a Twin Disc clutch.

Electrically driven equipment in the engineroom includes an Ingersoll Rand air compressor, Bryne Mek. Verksted fresh water and sea water pressure sets, Alfa Laval fuel oil purifier, and Allweiler bilge, general service, and fuel oil transfer pumps.

Two Hydromeca booster pumps for the side thrusters, and a Volvo Hydraulik pump for the net sounder winch, are also driven from electric motors.

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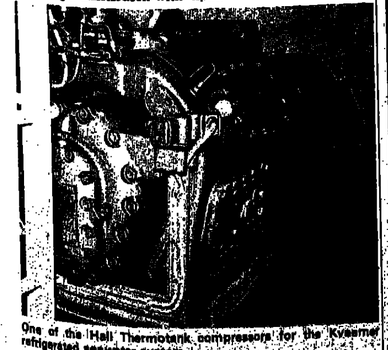

One of the Hall Thermotank compressors for the Kvaerner refrigerated seawater system.

Five steps to success

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A harbour generating set is housed at the forward end of the vessel, below the main deck. This consists of a Lister HRW4A diesel engine giving 43 hp at 1,500 rpm driving a Newage Stamford 34 kVA 220 V, three-phase, 50 Hz alternator.

Some 80-tons of fuel oil are carried in the stern and in wing tanks in the engine room. Fresh water is carried in the double bottom below the RSW tanks.

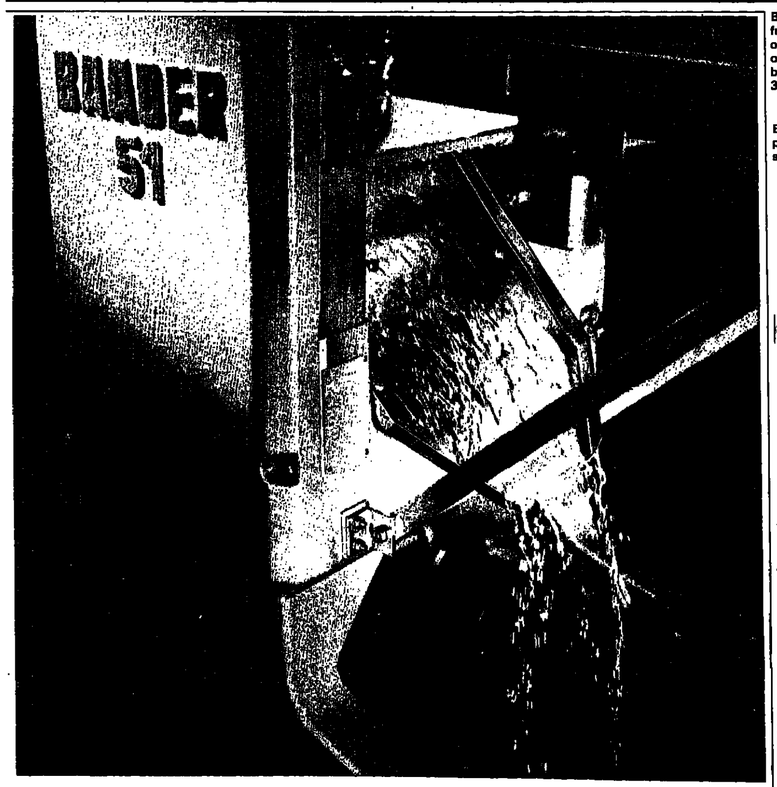
Three 52-ton capacity seawater ballast tanks are fitted in the fore end of the vessel and can be filled or emptied with an Allweiler electrically-driven pump fitted in the harbour generator room.

The six RSW tanks are served by a Kvaerner type 92/62E refrigeration system designed to cool 78-tons of seawater from 15 deg. C. down to 0 deg. C. in four hours.

Two Hall Thermotank electrically-driven compressors are fitted at the fore end of the main deck and water is circulated through the tanks by Allweiler electrically-driven pumps housed in the harbour generator room.

The RSW tanks are insulated with foamed polyurethane from John s/s and are fitted with steel hatches. An Autronics indicator monitors the temperature of the water in the tanks.

Most of the deck machinery is from Karmoy



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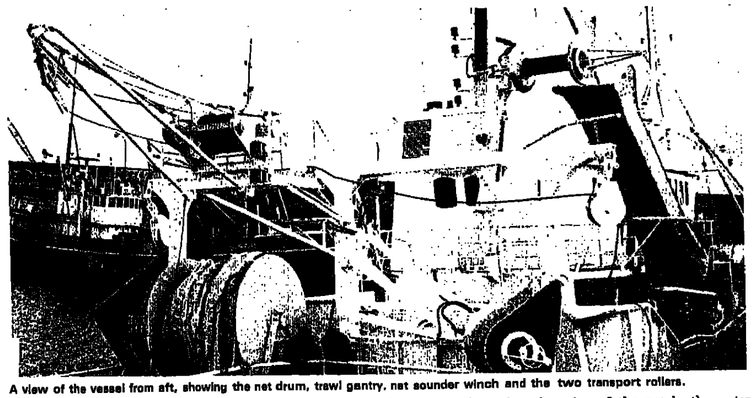
Below: the Triplex net winch from P. Bjorshol Mek. Verksted of Norway is fitted to starboard of the deckhouse. The three-barrel unit is the model 603-360-20.

Below right: Karmoy 14in. fish pump and fish and water separating equipment.

TAITS



A view of the vessel from aft, showing the net drum, trawl gantry, net sounder winch and the two transport rollers.

and includes: purse and trawl winch; endwire winch; net drum; net sounder winch; fish pump; anchor windlass; and boom swinger with boom lifter.

Located on the port side forward, the model 116-246 combined purse-trawl winch carries two drums for trawl warp, two for purse wire and is also fitted with a cargo drum.

The winch is driven from a hydraulic power pack at the fore and of the main engine and the spooling gear can be driven from an electrically-powered Anderson Odegaard pump fitted in the RSW compressor room.

Fitted to starboard of the deckhouse, the model 116 236A endwire winch is used for a number of functions including hauling in the wedge of the net, working the brailer for unloading fish from the tanks and for manoeuvring the fish pump.

The 14 in. fish pump is supplied with fish and water separator as well as hoses for pumping the catch from the net into the tanks.

A Triplex model 603-360-20 three-barrel net winch is mounted starboard of the deckhouse. This is used in association with two TRH70 transport rollers which direct the net in use into its own bin.

The Karmoy net drum is located aft of the deckhouse. A trawl gantry spans the quarters.

The double cable anchor windlass is positioned well forward on the shelter deck. A boom swinger and lifter are used to work the main derrick.

Deck layout and equipment enables the boat to go to sea equipped with purse seines and mid-water trawls ready for working as required. When she started operating, *Taits* carried Sganet purse seines and Norsenet mid-water blue whiting trawls.

The wide range of fish finding equipment in the wheelhouse includes three sonar sets: Wesmar SS220 Scanning Sonar, C-Tech Omni Sonar and Elac Mittel Lodar with LAZ 44 Sonar Scope.

The remainder of the fish finding aids are from Simrad and include two EQ echo sounders, CI Echoscope, MC Scale Expander and Storage Unit, and FI Trawl Watch trawl opening and depth indicator.

The FI Trawl Watch functions as a link between the vessel's net sounding equipment and one of the EQ echo sounders. It makes use of signals from the net transducer and converts them into markings on the echogram — an important aid to mid-water trawling.

The net is indicated on the echogram as two parallel lines representing the trawl opening, and is shown relative to the sea surface and bottom and to all recorded fish echoes. Thus, the equipment gives information on the position of the net in the water and on how well it is fishing.

Pre-warning of obstacles on the seabed, or of decreasing depth, are also given to allow

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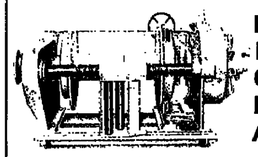

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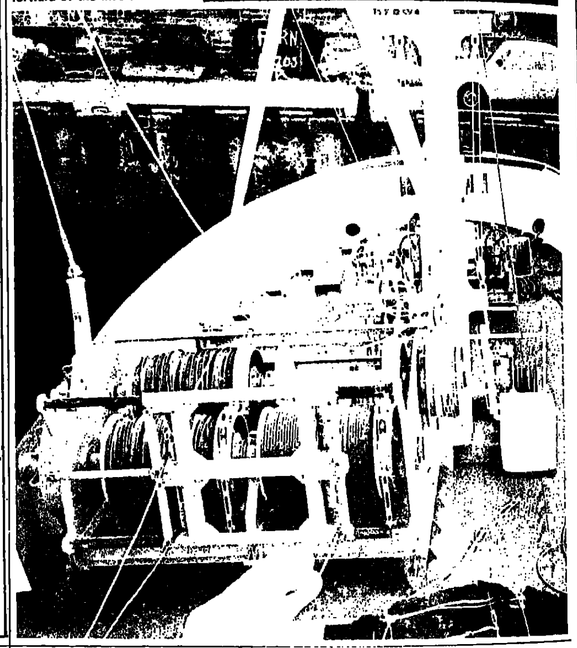
From page 73

TAITS

Below: View looking forward along *Taits'* shelter deck, showing the Kermoy combined purse seine and trawl winch. The anchor windlass is fitted forward of the mast.



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From page 73.

sufficient time for the trawl to be adjusted.

Taits is the first vessel in Scotland to be supplied with the new Simrad Catch Indicator, which is used as a supplement to the net transducer. This equipment consists of sensors fastened to the trawl to measure the tension of the mesh in several different places.

Changes in tension indicate the amount of fish in the cod end and prevents overloading of the trawl. This is of particular value in the blue whiting fishery where hauls can be so huge that nets often burst.

Sensors are connected by cable to the net transducer housing. Catch information is transferred to the vessel via the net transducer cable and is indicated on the EQ echogram.

Water temperature at the net can also be indicated on the echogram.

Intercom

Communications equipment in the wheelhouse includes: two 'Sailor' T126 R105 ssb radio telephones; 'Sailor' RT143 and RT144 vhf radio telephones; Vingtor Intercom system; Mermaid 23 watchkeeping receiver, and Skipper direction finder.

Navigation aids include: Decca Mk. 21 Navigator; Robertson AP-6 automatic pilot; Tenfjord H-330 160 ESC steering gear; Furuno FRM64 and FRS 24 radars and J. G. Krohn compass. A Hansen helmsman's chair is fitted in the wheelhouse and a Noack searchlight is carried on top of the wheelhouse.

Accommodation is of an exceptionally high standard. A suite for the skipper incorporating day-room, sleeping quarters and wash room with w.c. is arranged on shelter deck level, below the wheelhouse.

On the main deck level there is a large messroom and lounge, galley, three single-berth cabins, double-berth cabin and two showers.

A Beha electric cooker and Electrolux fridge are fitted in the galley. Electrolux deep freeze cabinet, clothes washing tub and dry provisions store are also located in the accommodation area.

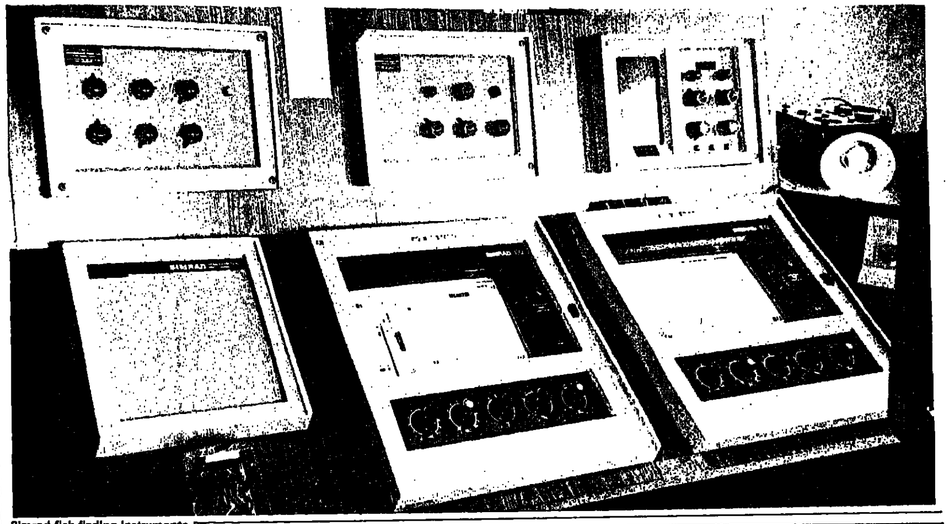
Two double-berth cabins and a four-berth cabin are arranged below the main deck aft.

All cabins are fitted with wash hand basins and central heating. Domestic hot water is provided from a Pyro oil-fired boiler fitted in the engineroom.

Taits has not had a very successful time in her fishing operations so far. Her first trips to *St. Kilda* were spent trawling for blue whiting. Lack of power to catch this fast moving fish proved a problem.

Later, *Taits* switched for an early start on the North Sea sprats but these did not put in an appearance. It is expected that, once the sprat fishery opens up, *Taits* will be putting direct into Denmark on some trips.

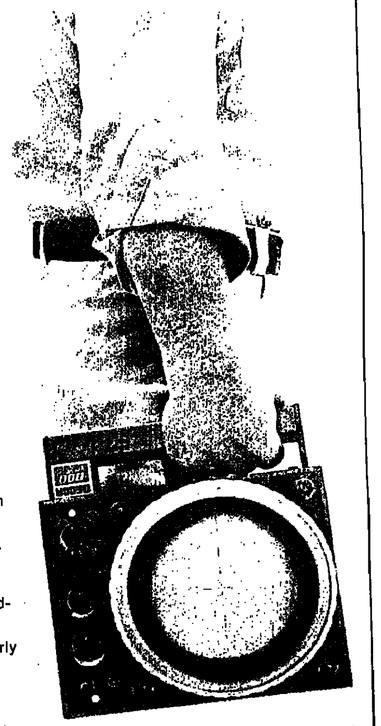
When the west coast mackerel fishing gets underway in July, *Taits* could well move on to this fishery in preparation for the south-west winter mackerel season.



Simrad fish finding instruments in the wheelhouse of *Taits*. Information from the Simrad Catch Indicator is displayed on the EQ sounder (bottom centre).

Three sonar sets are carried aboard *Taits*. Her Elac Mittel Lodar and the C-Tech Omni sonar from Canada are seen above, and the Wesmar SS220, below.

No other radar packs so much performance into such little space.



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WAID MORGAN NEWS

Government subsidy for self-employed persons

SINCE the successful involvement of Waid Morgan in reducing the pensions age for fishermen to age 55 all out efforts have been made to ensure that "the industry is made aware of the various options". Open to share fishermen.

Gordon Rae, the Waid Morgan Director mainly involved in this field, commented "To the self-employed this subsidy of up to 83p in the £ is one which must not be ignored. As well as making sensible provision for retirement, such pension schemes offer the investor an unequalled opportunity as the cash in a pension fund grows without payment of any form of Income Tax or Capital Gains Tax."

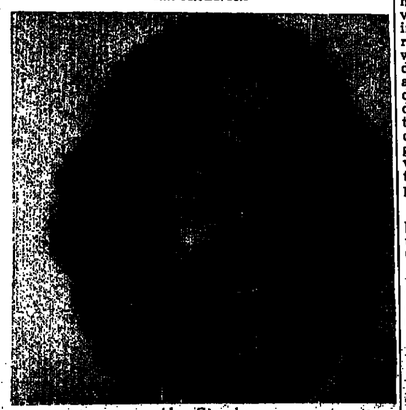
Gordon Rae

Anderson and Strachan lead the FEOGA fight

WAID MORGAN Directors Ian Anderson (Pittenweem) and Alex Strachan (Peterhead) are still completing FEOGA applications for fishermen and processors. Having a combined total of 98 applications with a total project value of £31 millions to their credit, their claim that their experience in the FEOGA market is unsurpassed can hardly be disputed.

Frequent visits to Brussels have broadened knowledge on this subject which has caused many heartaches as well as joys since our entry into the Common Market. It is reckoned that there will be a new FEOGA fund when the Common Fisheries Policy is eventually resolved and Waid Morgan are making sure that they have the facts. In the meantime, pressure is being applied in an attempt to have facilities available for applicants caught between the two schemes.

Ian Anderson



Alex Strachan

Fisherman's Health Scheme increases benefits

AS A RESULT of terms re-negotiated by Waid Morgan on behalf of the Working Fishing Owners Benefit Group, members can now increase their health insurance cover to £3,000 per annum.

The scheme which was introduced in 1973 has paid out a total of £64,000 in claims from long term illness or accident victims.

New terms for the scheme, the only one of its kind in the fishing industry, are as follows:

Cover £3,000 per annum to age 65 (after waiting period of 13 weeks).
Membership cost £62 per annum.

Reduced cover of £2,000 per annum on same terms as above.
Membership cost £42 per annum.

DIAMOND NEWS

SUNDAY TIMES gets it wrong!

CONTRARY to the impression given in the *Sunday Times* article of March 12th, 1978, Waid Morgan was not simply set up to sell diamonds to fishermen. Various "facts" in that article were complete fabrications.

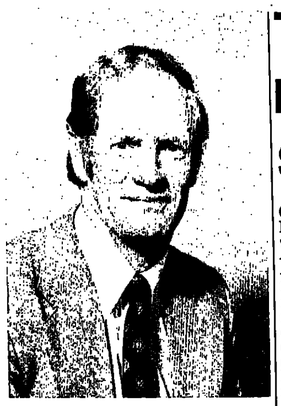
However, Waid Morgan have been studying the advisability of diamonds as an investment medium. As a result of this investigation, which have included visits to diamond dealers, exchangers, and manufacturers in London, Antwerp and Amsterdam, they have concluded that investment diamonds can be recommended as a good medium to long term investment for a maximum of ten to fifteen per cent of a person's assets provided:

1. The stone has been bought as close as possible to the central market (De Beers Central Selling Organisation).

2. That the diamond is certified both by the diamond dealer and an independent institute.

Taking these points into consideration they feel the amateur investor who takes professional advice can achieve healthy returns from such an investment.

DR. HEALEY'S WEALTH CURE



George Duffus and Jim Linnes

The NEW Symbol

CLIENTS AND FRIENDS of Waid Morgan may have been puzzled recently with the introduction of the new symbol — Have they been taken over? — "No" — explains Managing Director G. L. Cargill, "this is part of an internal organisation to focus attention on the different activities of the Company. The new symbol represents the four divisions, namely ***Financial consultancy** — Handling such items as Feoga grant applications, financial planning for new projects and tax planning, ***Insurance brokers** — Included in this division are the activities of the marine insurance, building insurance and all other apsects of general insurance. ***Life and pensions division** — This division co-ordinates such areas as pensions, investment, capital transfer tax planning and straight forward life assurance as a protection vehicle. ***Property division** — At present a small division within the company providing an estate agency facility of the company's Peterhead and Pittenweem offices.

New additions to the company are life and pensions men Stuart Carmichael and Keith Scott. Based in the north-east, they have specific responsibilities in the fishing industry having moved to Waid Morgan from national companies.

Where do they go from here? Always on the look out for new ideas to reduce clients tax liabilities or improve investment returns, Waid Morgan will not be standing still.

Much is happening on the economic and political scene and Waid Morgan intend to keep their place at the front.

Gavin Cargill, Managing Director

STUDY TOURS

SINCE the unsuccessful attempt to send a study tour to the less than successful Marseille Exhibition in 1975, Waid Morgan has progressed in this field having been successfully involved in tours to Japan, Canada, Seattle, Florida and Puerto Rico.

Next on the list of what have proved to be enjoyable as well as rewarding trips is Boston U.S.A. to coincide with Fish Expo '78. (October 1978). The organisers of the tour, Grampian Travel, or more specifically Robin Valentine their tours manager predicts a further success to this highly popular exhibition which is co-ordinated by the National Fishermen. Other tours planned for the next eighteen months include the Far East (Japan, Hong Kong, and Bangkok) — Spring 1979 and Fish Expo '79 at Seattle (taking in the fishing industry in Hawaii!)

Robin Valentine

Container News

SEVERAL clients of Waid Morgan purchased containers from Transcontainer Services, London before 5th April, 1977.

They feel that the concept of container leasing is excellent and should afford the investor a good return with what in effect is a form of business diversification. Initially the main advantage of this exercise is that capital allowances from the containers be offset against other income.

However, all indications are that this may be the case but tax inspectors have been querying this claim for some time.

As far as Waid Morgan is concerned they suggested to Transcontainer Services that no further investment could be advised within the fishing industry until such time as this point has been clarified.

? ?

Are you interested in any of the services of

Waid Morgan Associates?

Yes?

then fill in and post this coupon.

INSURE YOUR BOAT WITH WAID MORGAN

IN RECENT MONTHS Waid Morgan have been expanding their activities in the marine market. In an effort to increase active competition Waid Morgan have been exploring new markets through Lloyds. George Duffus the Director mainly involved in this field stated, "Insurance premiums for the modern fishing vessel reached astronomic levels and it is our aim to ensure that the vessel owners gets the best possible service at the lowest rate."

To: Waid Morgan Associates Ltd.,
8 Panmure Street,
Dundee, Scotland.

Date .....

Sirs,

I am interested in .....

Name (BLOCK LETTERS) .....

Address .....

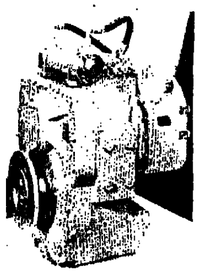
.....

Tel. No. .....

CATCH '78 PREVIEW

From page 16

The MRF.700 H.D. Mark IV gearbox suitable for all heavy-duty operations, with maximum input torque of 875 lbs/ft and a maximum input speed of 2200 rev/min with reduction ratios of 2,3,4,4.78 and 6:1, will also be on display.



Self-Changing Gears' MRF 700 IVB — one of three gearboxes due at the show.

GPG Containers, the specialist handling division of the GPG Group, are displaying their comprehensive range of plastic containers for the fishing industry on Stand C1050 of Catch '78.

For the trawler and quayside there are four specially designed fish boxes including the 45 and 55 litre fish baskets. The 25 kilo nesting and stacking box, widely used throughout the industry, the two stagger stacking 50 kilo boxes and the *30 kilo herring box.* These are all moulded in tough high-density polyethylene to withstand the rigours of hard daily use.

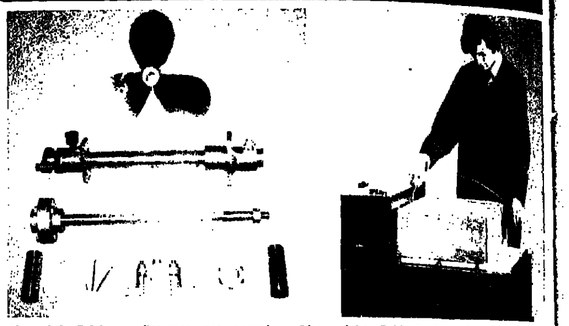
Also on show will be more than 20 different trays for the processing plant, including the Euro stacking and Ringway nesting/stacking trays which are available in solid or perforated varieties and a wide range of depths. There is also a special plastics dolly to wheel them around.

A full colour leaflet has *been produced for the exhibi*tion which features the GPG Containers fishing range. It is available from: GPG Products Ltd., Cranford, Blackdown, Learmington Spa, Warwickshire. Telephone: 0926 27933.

F. A. L. Scottish Propeller Service. This Buckie company will display propellers at different stages of repair from the original damaged and worn screw to the rebuilt unit.

On the manufacturing side there will be new propellers *and complete sterngear in*cluding shaft, bearings, etc. F. A. L. has also built up a thriving shipchandlery business and makes and supplies numerous items. These include aluminium fish scoops, marlin spikes, stainless steel rings, links and swivels, plus plastic dhan marker lights.

The latest method of shaft rebuilding carried out by the firm will be on show. This involves semi-automatic welding of the shaft while it is *rotated at set speeds, accor*ding to the diameter and material of the shaft.



Above left: F.A.L. supplies stern gear complete. Above right: Bridon's Phoenix semi-automatic side sealer.

Bridon Fibres and Plastics. The range of polypropylene seine net ropes (Sea Star, Red Star, Sea Lead, Viking and Briflex) and general fishing ropes, in*cluding the newly-introduced* Viking pot rope and 'Sea Queen' longline rope, will be available for inspection. Also, a full range of synthetic trawl twine, three and eight strand fibre ropes and ships stores sundries.

Bridon also manufactures Starstrap polypropylene strapping machines and hand tools. Being introduced at Aberdeen is the Phoenix SW-202 semi-automatic side sealer. Also being displayed is the Bandamatic UCP3 general purpose automatic strapping machine and Starstrap hand tools.

M. G. Duff Marine Ltd. Working in the field of cathodic protection for small and intermediate size vessels, this firm will be displaying its range of sacrificial anodes suitable for all types of construction.

New products include shaft and rudder button anodes for the small vessels, chandlery packs of anodes plus the new Automatic Impressed Current System, currently being installed on vessels in many parts of the world.

Also featured is the Servi range of hydraulic steering gear with working units of hand and power assisted gears suitable for fishing vessels.

White Fish Authority. This stand's theme will be developing skills for tomorrow's industry. It will illustrate the WFA's wide range of activities including; development of improved fishing gear and techniques; training fishermen and shore personnel; exploitation of under-utilised resources; fish farming; Kingfisher charts; performance trials; operations research; grant and loan; publicity and market development. The WFA's consultancy services will also be featured. WFA staff will be on hand and orders will also be taken for Kingfisher charts.

Transatlantic Fishing Systems Ltd. Suppliers of longlines and European concessionaires of the North American Luhr Jensen range of products.

On show will be constituent parts of the equipment — snoods, line, dhans, grapnels, GRP snoodstore bins, line bins, hydraulic haulers and rope drums.

The firm also manufactures gurdies, rollers, strippers and weights for the mackerel season.

Of special interest to everyone who likes good food is an electrically operated fish and meat smoker. This is the first inexpensive smoker to provide truly professional results and has already proven a great success with the fishing community.

Lucas Marine Ltd. The full capability of Lucas Marine engine-mounted electric and accessories will be exhibited *on this stand.*

Francis Searchlights will be featuring its range of specialist searchlights including the newly-introduced high voltage compact searchlight, the M35/M36, and a new marine floodlight.

Also displayed on the stand will be a full list of the newly-appointed Lucas Marine specialist agents throughout the UK and Ireland which will be providing a sales service and distribution network for the firm's products.

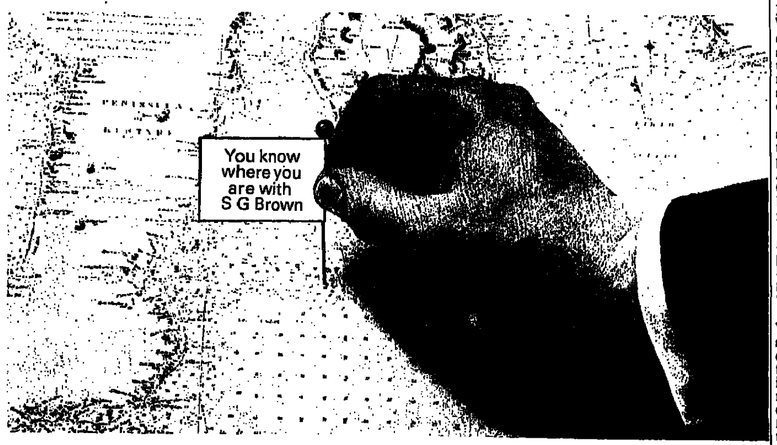
Ashton Containers will feature the company's Viking solid board fish boxes. The company is also exhibiting ACLaim, its wax-saturated corrugated fibreboard packaging.

Viking waterproof and non-absorbent fish boxes are made from polythylene-coated fibreboard. Fish boxes are available in sizes varying from ½-stone to three-stone and over.

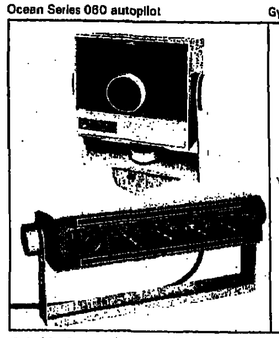
Ashton's new ACLaim material is extra strong and weather *resistant,* making it particularly suitable for shellfish and heavy fish. An advantage of ACLaim is that it combines high stacking strength with the lightness and economy of corrugated board.

The firm claims a nationwide network of agents which can supply fast deliveries of Viking boxes, printed or unprinted, to merchants and processing plants in Aberdeen and other UK fishing ports.

For reliable, accurate gyro compass and autopilot equipment – fit S G Brown.

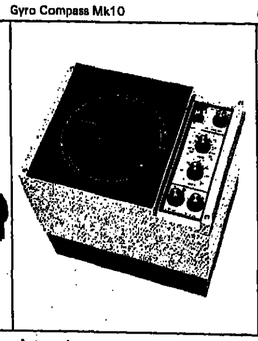


Ocean Series 080 autopilot



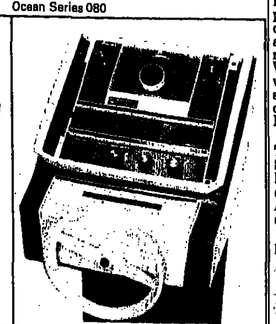
Suitable for smaller vessels requiring an autopilot to be added to existing hand control. Autopilot offers same benefit as in the 080 series.

Gyro Compass Mk10



Automatic starting and running control. Outputs for repeaters, direction finder radar and autopilot.

Ocean Series 080



Two channel all electric steering control and autopilot. Choice of follow-up or direct-acting hand control.

For further information contact the Marketing Manager,

HAWKER SIDDELEY

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See you at CATCH '78

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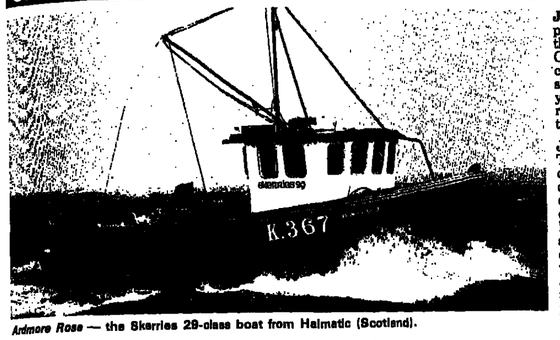
Hawker Siddeley Group supplies electrical and mechanical equipment with world-wide sales and service.

Two 290 shp Volvo Penta TAMD120A diesels coupled Drive. Total output is 580 shp.

CATCH '78 PREVIEW



Ardmore Rose — the Skerries 29-class boat from Halmatic (Scotland).

Alexian Electronics is a small company specialising in sales, rental and service of marine electronics in east central and north-east Scotland. It is agent for such firms as Redifon, Furuno, Sperry Light Marine, Wesmar, Electronic Labs., SP Radio and can supply equipment from most manufacturers.

Live radar displays will be on the stand with scanners mounted on 30ft. scaffold enabling a view of the nearby coast to be picked up. These displays will be of the new Sperry 104, Sperry Mk. 74 and Seascan Mk.3.

The firm also hopes to show "the revolutionary new echo sounder display technique which utilises a TV-type tube and logic chip memory circuits to display targets, thus making the electrogram paper display — with all its attandant problems of mechanical wear, paper costs, etc. — obsolete." These units are made by the US firm of Vexilar and in the UK by Incaster Associates Ltd.

Anglesey Fire Protection. Advice on various types of fire-fighting equipment required on board British fishing vessels subject to the Department of Trade safety rules will be available.

The main display will be 'Marinex' Halon gas extinguishing systems now being installed on an increasing number of vessels. Also featured will be the 'Marinex 242' fire alarm and detection systems, claimed the most rugged and tough electronic fire equipment available. The firm's normal range of extinguishers, sprinklers, fire hose and fittings will also be shown.

Parsons Chain Co. The well-known "Trawlex" range of alloy steel chains and fittings will be featured. On show for the first time will be the new Midlink "Trawlex" chain which retains the strength of the traditional chain, but is 16 per cent cheaper.

Volvo Penta. Propulsion engines are available with outputs between 10 and 290 shp, while auxiliary sets produce from 50 to 400 hp.

Expected to be one of the main attractions on the stand is the advanced 'Y' Drive which has doubled the power available from the company's engines. A unit for coupling two engines to one gearbox, this can result in up to 580 shp driving one propeller-shaft.

The 'Y' Drive will be exhibited coupled to two 290 shp TAMD120A diesels to provide 580 shp.

Other propulsion engines on show are the 30 shp MD17C heavy-duty diesel, the 106 shp MD70B, the 195 shp TMD100A and the 260 shp TMD120A.

Enterprise Sheet Metal Works (Aberdeen) Ltd. Two fish processing machines will be displayed. One is an hydraulic press for producing laminated fish blocks.

The other machine is for breadcrumbing scampi, fish fillets, fish fingers, etc., and can be supplied as a double machine for increased enrobing.

This company is now Scottish agent for the Swedish-manufactured fish processing machinery from Arenco.

Orkney Boat Builders Association members will *again be offering a variety of* products and services.

James Duncan, Burray: photographs and models of the traditional wooden and GRP fishing vessels the yard constructs. With a new slipway facility planned, the yard will soon be able to offer repair facilities for vessels up to around 50ft.

J. W. MacKay, Stromness. This yard will display a 12ft. clinker-built mahogany dinghy of a standard-type currently produced by the company. Also on display will be photographs and literature showing the traditional clinker-built fishing vessels in which the yard specialises.

Halmatic (Scotland) Ltd., Kirkwall: the original wooden 24ft. Skerries hull from which the new Skerries 24ft. range has been developed. The new design by Murray Cormack Associates has been produced specifically for the single-handed fisherman working lines and creels and is aimed at world wide markets. The new vessel has a length of 24ft. overall, with a beam of 9ft. 3in. and a draft of 3ft. 3in. A raised foc'sle head is fitted forward of the wheelhouse and particular attention has been given to styling and good access to controls at both inside and outside steering positions. The first vessel on order is for Northern Ireland and will be fitted with a Lister ST3M 30bhp engine. In addition to the Skerries 24-footer, the standard 36ft. hull will also be on display.

Recently delivered by Halmatic was *Ardmore Rose* built to the order of John Ridgeway for the west coast of Scotland.

British Marine Equipment Council. An information stand will be used to promote the products and services of all members of the Fishing Division, including those not exhibiting.

Catalogue material from non-exhibiting companies will be on display and specific inquiries from BMEC staff manning the stand will be forwarded to the companies concerned.

Marine & Industrial Transmissions (Stand B690) will display the MIT Marine diesel conversion system, the Twin Disc 514, and 510 marine gearboxes, a new type of controllable pitch propeller from Scandinavian Propellers, Scan Auto pilot, 1st Mate Steering System, and Cinkle Steering Systems.

The marine gears cover a range of horsepower from 50 hp-1,780 hp, and include V-drive, U-drive, and down-angle output configurations.

The steering gear covers a range of rudder torque from 40 KGM to 5000 KGM.

Charles Siddon Ltd (Stand B540) will present samples of books of fish tallies, invoices, statements, duplicate receipt books all of which are printed to the customers' individual requirements at Siddon's printing works. On view along with samples of both plain and printed polythene coated board fish boxes, will be fish

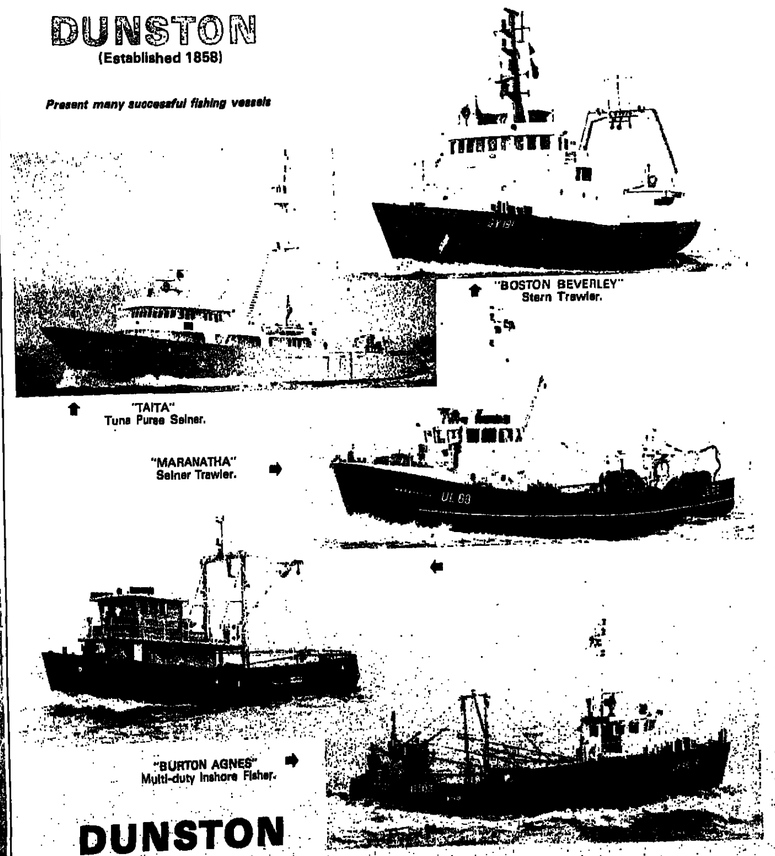
Turn to page 81

Breadcrumbing machine from Enterprise Sheet Metal. The unit can be used on scampi and fish fingers, etc.

DUNSTON

(Established 1858)

Present many successful fishing vessels



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● FOR TOP CLASS NEW STEEL BOATS CONSULT A INDEPENDENT BRITISH SHIPBUILDER ●

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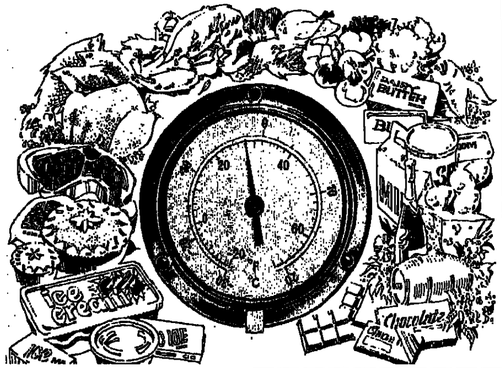

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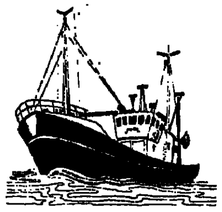

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CATCH '78 PREVIEW

From page 79

box liners, fish film, vegetable parchment and all types of polythene products for packaging.

British Ropes Ltd. (Stand B550) Steeline for mid-water and bottom trawling will be on display. This has a smaller warp, higher strength, and larger outer wires with heavier galvanising and lubrication.

Marblue trawl warps will also be exhibited.

Examples of combined ropes that utilise the properties inherent in both fibre and steel will also form part of the display.

Arthur J. Heighway Publications Ltd. *Fishing News:* The biggest trade paper serving the fishing industry in the British Isles. Established at Aberdeen in 1913, *Fishing News* is currently enjoying the highest weekly circulation in its history. Special exhibition issues will be on the stand with the regular Friday issue available mid-way through the show.

Fishing News International: Also on show will be the monthly *Fishing News International*, now in its new lively newspaper format. Readers are in over 160 countries and territories and overseas subscribers can receive copies by airmail within days of publication. The paper now carries up-to-date news from fishing areas throughout the world.

Fish Farming International: In addition the display will include copies of the quarterly magazine *Fish Farming International* which has been developed to serve the needs of this rapidly expanding industry.

R. A. Lister & Co. Ltd. The new Lister 250 bhp propulsion diesel engine coupled to a controllable pitch propeller will be the main exhibit.

The JWSC6M 250 bhp engine is displayed with a Hundested VP6 FR-H controllable pitch propeller unit.

Developed from the JW range, this engine is turbocharged and inter-cooled to continuously develop 250 bhp at 2,000 rpm. Although the power-to-weight ratio has been greatly improved, many design features of the well-proven JW6 range have been retained to make the JWSC6M suitable for fishing boat applications, where durability coupled with operation flexibility is required.

Also featured will be a 25 kW generating set. Powered by a water-cooled HRW4MA engine, this unit also incorporates an air compressor, driven through an extension shaft and isolating clutch.

Examples from the current Lister series of water-cooled and air-cooled diesel engines which range from 5 to 250 bhp will be on the stand.

Catfish Ltd. A 24ft. GRP catamaran-hulled fishing boat is the latest development from this firm. The prototype 'Sandskipper' as it is known, has just been completed and is designed to carry one tonne of fish and gear.

Able to negotiate surf up to 2 metres high, the Sandskipper is aimed at markets in developing countries. As a multi-purpose boat it is claimed to be "well-suited to gill netting, trap fishing and seining, and can even tow a small trawl".

The prototype version is fitted with a 6hp Petter engine plus sail. For heavier work it is envisaged that power layout consisting of a 12hp Petter twin could be fitted.

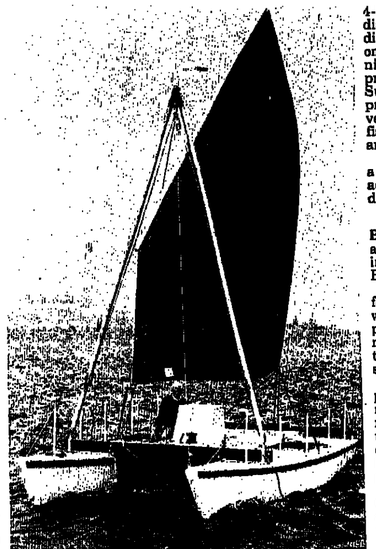
Top of this catamaran range is the well known 36ft. Catfish.

Moba B. V. (UK) Ltd. Fish grading machinery with capacities for up to 24-pieces per hour.

Demonstrated on the stand will be the type FF70 machine capable of placing 3,500 pieces per hour into eight grades. This machine can be manually operated (2 persons) or fitted with an automatic loading conveyor.

Morep Ltd. Apart from its growing range of synthetic ropes, twine and netting, this firm will be also featuring equipment from Holland for which it acts as agent.

From the Universal fish box washing machine range will be one of the smaller units, capable of handling 25-60 boxes per hour. At the top end of this range there are machines with capacities for up to 2,000 boxes per hour.



One of the Catfish range. This is the 24 ft. catamaran prototype coming to Catch '78.

A "Hodi" fixed propeller nozzle designed for trawling, with an inside diam of 75in., will be on the stand. This will be displayed in combination with a manganese bronze Vordap fixed propeller.

The well-known Promac ice making machines will be in production on the stand. Following on from the Promac refrigerated seawater tank system, a dual-purpose refrigeration system for tanks and holds is being introduced.

Christian Salvesen (Fish Selling) Ltd. (C.S.S.) An industrial cleaning company specially geared to the needs of the fishing industry it operates the National Box Recovery Scheme, which works from over 30 locations in the UK.

In Aberdeen and Peterhead there is a local recovery service for dirty boxes from fish houses, yards and cold stores. After cleaning the boxes, C.S.S. helps customers to organise their return to ports of origin.

A Peterhead depot provides controlled boxing of vessels and Lockfast storage of holding stocks for customers.

The depot at Pointlaw, in Aberdeen Harbour, provides a complete high-pressure waterblast cleaning, degreasing and descaling service for fishing vessels. This includes: fishrooms, pound and shelf boards, gutting machines, decks, winches, enginerooms, bilges, hulls and casings, as well as the preparation of all metal surfaces for painting.

Bruntons Propellers Ltd. Exhibits will include a 5½in. diam. mild steel sterngear arranged for oil lubrication and a 3½in. diam manganese bronze sterngear arranged for water lubrication.

Amongst a range of propellers featured will be a 70in. diam manganese bronze 4-bladed unit, a 1,400mm diam nozzle type and a 56in. diam Superston Screw. Also on display will be a 1,000mm nickel aluminium bronze propeller and a 36in. diam Superston Seventy; these propellers being finished to very close limits suitable for fisheries protection vessels and fast patrol boats.

A part-repaired propeller, a bulkhead gland and other accessories will complete the display.

Baader Ltd. Featured from a wide range of fish processing machines will be the Baader 158 gutting machine.

This machine was designed for small white fish such as whiting, haddock, cod, pollock, hake and, also, for mackerel in the range from 25 to 45 cm (10 to 18 in.) at a speed of 55 fish/min.

It opens the belly with a plain circular knife and removes the entrails with rotating ejectors. The gutting tools are automatically guided to hit the main blood vessel for good bleeding of the gutted fish.

A skinning machine (Baader 51) fillets fish of all sizes from all types of white fish and redfish.

Small and medium sized fillets can be placed side by side and a throughput of up to 160 fillets/min. can be achieved. The skin is pulled off leaving the silver membrane on the fillet.

The machine is built in stainless steel for low maintenance and long, trouble free performance.

The new Baader 121, a combination heading, filleting and skinning machine for filleting blue whiting at a speed of 120 fish/min with only two operators is to be demonstrated. The machine will also handle other small white fish in the range from 24 to 40 cm (9.5 to 16 inches).

It is equipped to produce skinless single fillets, or single fillets skin on, or block fillets skin on. With its built-in bone sparator, minced fish of top quality without discolouration can be produced.

Perkins Engines Group Ltd. A Perkins four-cylinder 4.236 marine engine will be featured.

Suitable for small inshore workboats, the engine develops 72 shp at 2,500 rpm.

In addition to a comprehensive range of four-cylinder marine diesel engines, the Perkins marine engine family also covers three, six and eight cylinder engines with horsepowers up to 235 shp.

The Perkins marine distributor for Scotland, James Bowen and Sons Ltd. of Wester Hailes Works, Murrayburn Road, Edinburgh, also has premises in Glasgow and Aberdeen.

Newage Engineers Ltd. will be showing the H2P hydraulically actuated two-pitch propeller and the IMA (inside mechanically adjustable) propeller-systems capable of producing the kind of fuel economy associated with fully controllable pitch propeller systems, but at much lower initial installation cost.

The H2P is suitable for trawlers or workboats with engine power in the 350 to 900 bhp range. H2P systems incorporate a propeller with two-blade pitches — coarse (high) pitch for economic free running and fine (low) pitch for trawling and towing operations.

Pitch alteration is effected from a simple switch in the wheelhouse — and can be carried out while the tailshaft is rotating.

As a complete propulsion system, Newage markets the H2P propeller together with actuator, hollow tailshaft through which passes the blade pitch adjustment rod, and a modified Reintjes reverse reduction gearbox.

With suitable twin reverse reduction gears, the H2P also enables two engines of low horsepower to be connected to a single propeller shaft.

The IMA system is a simplified version of the two-pitch system, using the same propeller and hollow tailshaft assembly, but fitted with a mechanical actuator.

For open running or nozzle operation, the IMA system can be used with any type of reverse reduction gear.

A major design benefit claimed with either H2P or IMA system is that it is possible to avoid the over-engining of vessels, normally associated with "optimum pitch" solid propellers.

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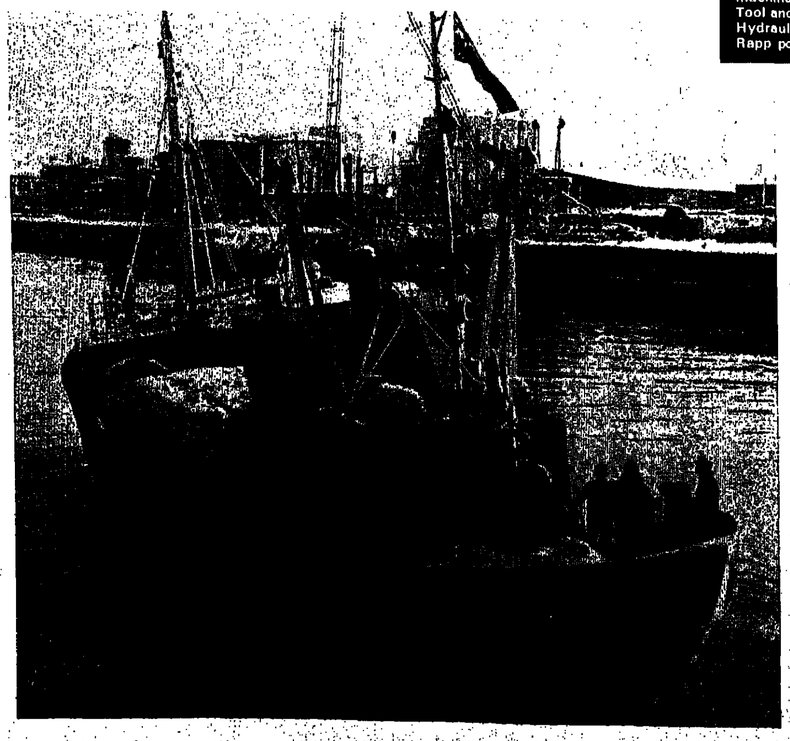
NEW BOATS OF 78

LEFT: The solid looking 74 ft. wooden-hulled trawler *Altaire* was delivered from the Sandhaven yard of J. and G. Forbes and Co. in February to a partnership of seven Shetlanders, headed by Skipper John Peter Duncan of Ollaberry. She is powered by a Kelvin 495 hp engine.

RIGHT: Herd and Mackenzie of Buckie built *St. Kilda*, an 80 ft. steel seiner-trawler for Skipper John Thomson of Lossiemouth who fishes from the Scottish west coast port of Lochinver. Her Fishing Hydraulics reels are of a new design to work varying lengths of rope off the west coast — and she is also first with Decca's ISIS engine alarm monitoring system.

BELOW LEFT: *Merlewood* sets out from Aberdeen on a wintry day. The 75 ft. seiner-trawler was delivered by the Campbeltown Shipyard in February for Skipper John Reid and the Don Fishing Co. A German Deutz engine of 480 hp powers her and deck machinery includes Northern Tool and Gear winch, Fishing Hydraulics rope reels and Rapp power block.



LEFT: currently fishing from Peterhead is the 79 ft. wooden-hulled seiner-trawler *Conquest*. Built early this year by George Thomson and Sons of Buckie for Skipper Dennis Reid, she has fishroom cooling plant and is powered by a Caterpillar 565 hp engine. Her gear handling machinery includes Sutherland winch and Lossie Hydraulics rope reels and power block; fish-finding aids are by Wesmar, Elac and Kelvin Hughes.

BELOW: *James Noble (Fraserburgh) completed Devotion* for two Peterhead brothers, Alexander and James Strachan. The 74-footer, which has been trawling for shrimps from her home port during the last few weeks, is the first vessel in the UK fitted with a new sonar system from Furuno. Other equipment on the wooden boat includes Kelvin 500 hp engine, Northern Tool and Gear winch, plus Lossie Hydraulics power block.

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West coast men swing to co-ops

CO-OPS are a way of increasing fishermen's real incomes. The movement claims that more and more fishermen are now becoming aware of the advantages of grouping together.

Three new societies have been set up during the past few months alone.

For a number of years the co-op movement was strongest on the Scottish east coast. Now there is terrific interest among west coast fishermen and those on the Scottish islands where co-ops have been set up on the Hebridean islands of Lewis, Uist and Barra.

There were 30 skipper-members at the time of its inauguration early this year and the Stornoway Fishermen's Co-operatives Ltd. will initially confine business to chandlery and fishing gear sales. It has plans for further developments.

A member of the board of directors told *Fishing News* that poor quayside prices and the high cost of fishing gear had prompted local fishermen to set up the group.

He said: "The pierhead prices for fish at Stornoway are the lowest in the EEC.

"We're looking for better prices and chandlery at a discount".

The Uist association operates under the unpronouncable looking name of Co-Chomunn Iasgairean Uidhist Ltd. (Gaelic for Uist Fishermen's Co-operative Ltd).

Although this society will also deal with chandlery sales at present, it eventually plans to move into shellfish processing and marketing.

Fishing from the island of Barra has seen a revival in recent years and local fishermen have set up a co-op selling chandlery under the name of Barra and Vatersay Fishermen's Co-operative Ltd. It also hopes to spread interests much wider to include such facilities as lobster storage ponds.

On the east coast the five-year-old Fishermen's Mutual Association (Buckie) Ltd. is making tremendous strides. Founded in 1973 by a group of Moray Firth fishermen wanting to run their own fishselling association and control their own shore-based interests, the Buckie co-op had a turnover of £4 million in 1977. It now has 26 member vessels, including seven which belong to Peterhead.

Alan R. Caird, manager of the Arbroath Fishermen's Association Ltd., is chairman of Fishing Co-operatives Trading (Scotland) Ltd. He says fishermen can put money in their pockets by joining a co-op.

As the majority of member vessels land their catches at Peterhead, a chandlery shop was opened there in 1976 and a fuel oil depot was set up several months later.

Early this year an office was opened in the port to handle the fishselling side of the business.

Until the end of last year catches landed at Peterhead by member vessels had been auctioned by the Don Fishing Co., but increasing membership made it essential for the co-op to sell its own fish.

A spokesman for the Buckie co-op told *Fishing News*: "We want to give the image that we're not solely a Buckie organisation. "With the increase in the Peterhead membership, 25 per cent of the board of directors belong to that port and 25 per cent of our board meetings are held there".

He said the co-op is now able to supply a comprehensive agency service for members through the Peterhead office, in addition to supplying oil, chandlery and fish boxes.

It is possible that the co-op may also set up in Fraserburgh at a later date, although there are no members belonging to that port yet.

With the gereral expansion of fishing co-ops in Scotland, the Fishing Co-operatives Trading (Scotland) Ltd. is also seeing an increase in business. Turnover in 1977 was just short of £1 million and this year it is expected to go up to £1½ million.

The federation was formed in 1975 to enable fishing co-ops to buy in bulk at reduced prices.

Initially the group dealt with sundry items such as rubber gloves, oilskins and boots but, today, it can supply all chandlery including nets, ropes, oil and protective clothing.

It offers a range of its own branded goods including tea, coffee, bilge wash, detergents and oilskins which carry the FCTS motif.

Membership of the association has grown from seven societies in 1975 to 21 at present — including organisations in the Isle of Man and Northern Ireland.

One of the newer companies joining FCTS is the Aberdeen Inshore Fishselling Co. Ltd., formed last year by a consortium of skippers to run their own affairs.

All the skippers are shareholders in the new company, including Scotland's top seine net fisherman Davie Smith of Anstruther.

The new fish-selling agency of Grampian Sea Fishing Ltd. which handles 11 vessels based at Peterhead, is also a member of FCTS, although not a fishermen's co-operative.

Grampian, whose chairman is well known skipper, William Campbell of Elgin, opened a chandlery shop at Peterhead late last year to sell a comprehensive range of boat needs from nets to washing up liquids.

The FCTS moved its headquarters to new premises at Leith Docks in January.

Suppliers frequently offer special prices if the FCTS can purchase in large quantities, so lack of storage space at the former premises within the offices of the Scottish Agricultural Organisation Society in Edinburgh made the move essential.

The new premises at 21 Constitution Place, Leith Docks, Edinburgh, comprises a large store room and three smaller rooms for offices. Book keeping, storekeeping, etc., is also handled by federation staff and the FCTS can now import goods direct to Leith Docks for member societies.

A commodity panel, comprising management personnel from a number of Scottish co-ops, has been set up to discuss products and prices, etc.

Speaking to *Fishing News* recently about the aims of the federation, FCTS secretary Robert H. Milne said: "Our aim is to improve the real income of fishermen and we can help to achieve this by reducing the input costs.

"We live in days bedevilled by the green pound and the Common Fisheries Policy. It is only by co-operating closely together that we can survive and to prove to all that there is indeed strength in unity.

"My ambition is to see fishermen's co-ops get an increased share of the market and, to do this, we must ensure that we stock quality goods at realistic prices.

"However, we must not restrict our activities to chandlery only. Co-operation amongst fishermen can extend to participation in insurance, fish processing, fish selling, ice manufacture, accountancy services and so on".

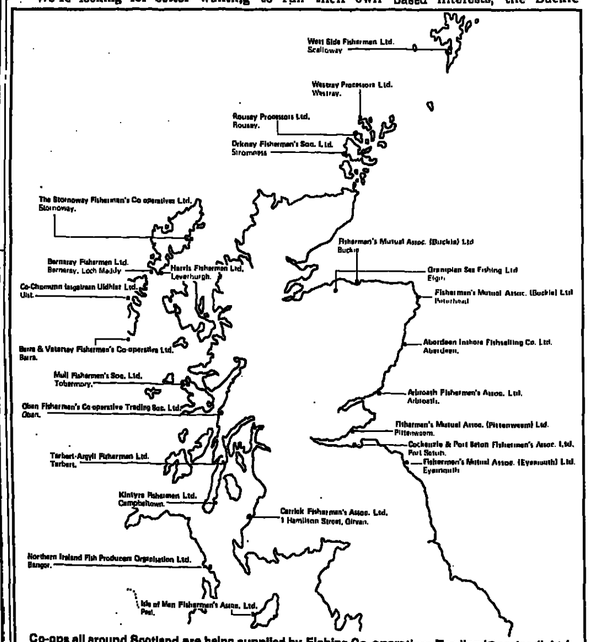
The chairman of the FCTS is Alan R. Caird, manager of the Arbroath Fishermen's Association Ltd. Mr. Caird told *Fishing News* that there are enormous benefits to be gained from membership of fishing co-operatives and of the FCTS — particularly with politics and economics now affecting the fishing industry so seriously.

He said: "Many things can claim to have changed the face of the British fishing industry but none more, I would suggest, than our entry into the EEC.

"Producer organisations had to be set up to protect our marketing. The Federation of Fishermen's Co-operatives was brought into being to give fishermen a voice in Europe.

"It soon became obvious that to organise the selling side of the industry was all very well, but it was just as important to organise the buying side.

"It was, therefore, a natural step forward to form the FCTS to help fishermen with their purchasing".



Co-ops all around Scotland are being supplied by Fishing Co-operatives Trading (Scotland) Ltd.

One co-op member vessel is Skipper Eric Smith's seiner *Rhodelia* (above), part of the Buckie group. *Argonaut IV* (right), the 80 ft. seiner owned by Davie Smith, works through Aberdeen Inshore Fish Selling Co. Below: fish from a member vessel of the Fishermen's Mutual (Buckie) goes for sale at Peterhead.

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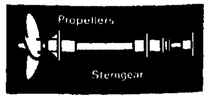

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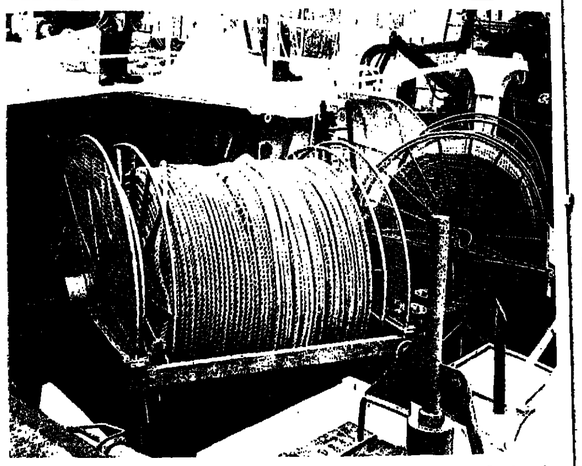
CAMPBELTOWN'S LATEST '80'

FRASERBURGH'S new seiner-trawler *Fidelis II* has made a very promising start to her career.

At a time when many seine netters are having a rather lean time in the North Sea, she has landed some paying catches of more than 350 boxes at Peterhead. On one occasion she put ashore a really good haul of 434 boxes.

The boat is seine net fishing at present, but she may well turn to white fish pair trawling in partnership with a Peterhead vessel later on.

Built by the Campbeltown Shipyard for Skipper Stewart Buchan, *Fidelis II* comes from the very successful line of cruiser-sterned steel '80'-class which the Argyll firm has produced in recent years.



Fishroom

She is of round bilge hull form and has an overall length of 79ft. 11in.; length between perpendiculars, 70ft. 4½in.; beam, 22ft.; moulded depth amidships, 11ft.; and draft aft, 10ft.

The layout is traditional with the deckhouse aft. Below decks the vessel is subdivided from forward into forepeak, fishroom, engineroom and crew's cabin.

Wing tanks in the engineroom carry 3,200 gallons of fuel oil and there is a daily service fuel tank of 300 gallon capacity.

Some 400 gallons of fresh water are carried below the net store, forward, and other tanks aboard *Fidelis II* hold 90 gallons of lube oil and 50 gallons of hydraulic oil.

The fishroom, with a capacity of 135 cu. m., is insulated with foam faced aluminium sheet and is fitted with aluminium posts and redwood pond boards.

A Northern Tool and Gear 'Mastra' hydraulic combination seine and trawl winch is located below the whaleback, the trawl drums lying in a fore-aft position at the fore side of the seine barrels.

The two-drum set of seine rope storage reels, and the power block, come from the Lossie Hydraulic Co.

Controls for the reels are arranged in the wheelhouse and the power block is hung on a single-reach derrick aft of the deckhouse. Two fish washing troughs from Simpson of Thurso are fitted beneath the deck shelter.

For use when trawling, the after towing blocks are hung from stout steel arms projecting from the after corners of the deckhouse. Another gallows post is fitted at the starboard bow.

Monitor

He deckshelter, foremast and the landing derrick are of aluminium and the A-frame seine derricks are fitted on the deckhouse top.

Fidelis II is powered by a Mirrlees Blackstone type ESL6MGR air-starting engine which develops 635 bhp at 750 rpm. It drives a Bruntons four-blade, 70in. diameter, manganese bronze, fixed-pitch propeller through a Lister Blackstone gearbox of 2.5:1 reduction ratio. A Gent fault monitor was supplied with the engine.

A 24V Transmotor generator, a 3in. Desmi bilge and general service pump and the steering gear pump are belt-driven from the after end of the main engine, whilst another 24V Transmotor generator and the hydraulic braking pump for the rope reels are driven by belts from the fore end.

The rope reel braking pump can be used to power the deck units for fishing gear retrieval.

Pelican Engineering (Sales) Ltd. supplied the auxiliary generating set which is based on a Gardner 125 hp

Turn to page 88

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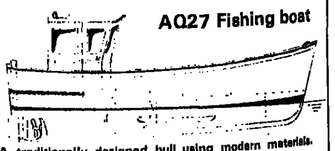

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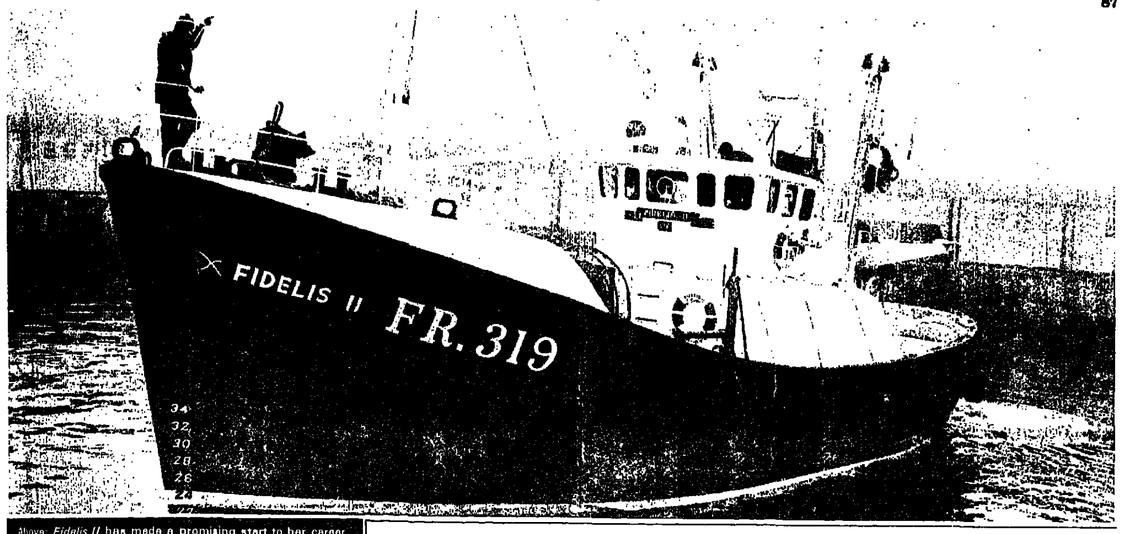
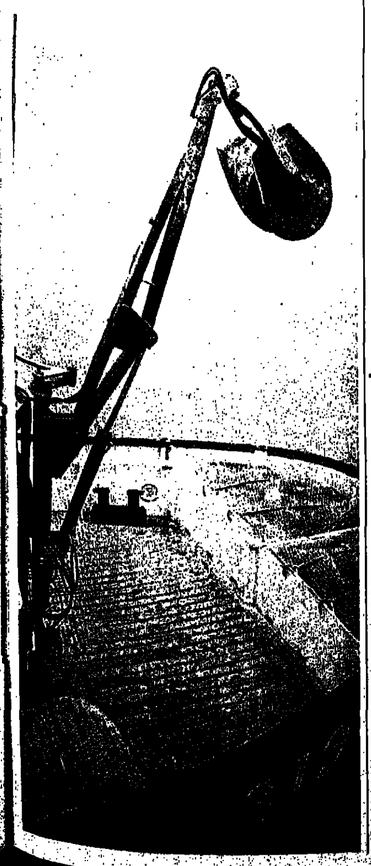


Above: *Fidelis II* has made a promising start to her career seine net fishing from Peterhead. She may switch to pair trawling.

Left: her Lossie Hydraulics rope storage reels. The Mastra seine and trawl winch, hidden by the reels, is fitted below the whaleback.

Below: another Lossie product aboard *Fidelis II* is her power block. It is hung on a single-reach derrick aft of the deckhouse.



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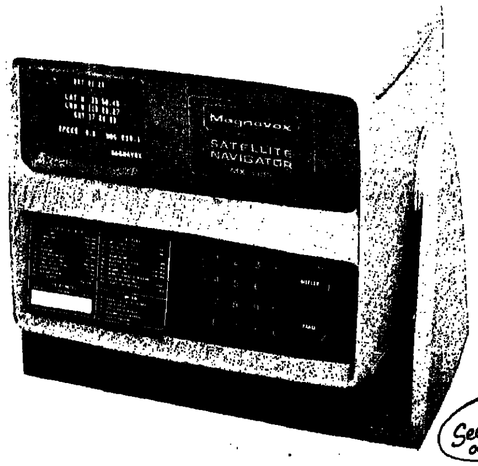

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LATEST '80'

From Page 86.

engine running at 1,500 rpm.

A Twin Disc clutch transmits power from the fore end of this engine to the Dowty variable delivery hydraulic pump for the winch, also the Vickers double hydraulic pump for the rope reels and power block.

A 24V Transmotor generator is driven off the after end of the Gardner engine, while a belt drive is provided at the free end of the generator for a 3in. Desmi bilge and general service pump and a Wilson air compressor. A small Petter auxiliary engine is fitted to drive another air compressor.

Watson and Dundas Ltd. supplied the main switchboard and an unusual feature of the vessel is that she has a 24V electrical system.

Other fittings in the engineroom aboard *Fidelis II* include a Pyro oil-fired boiler to supply central heating and domestic hot water.

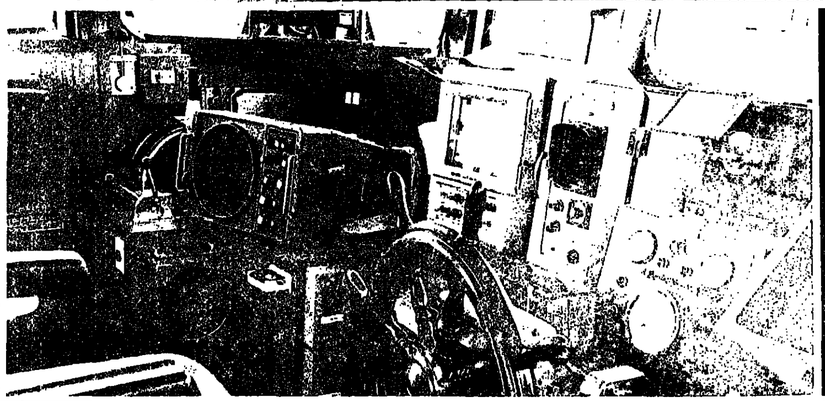
Electronic instruments in the wheelhouse are mainly from Marconi and include Fishgraph K type 681A bottom expansion recording echo sounder, Fishscope K CRT display unit, Wesmar SS220 sonar, Koden MD-505 II radar with variable range marker, Minicall II intercom system, Warden III watchkeeping receiver, 'Sailor' T128 R105 radio telephone and 'Sailor' RT144 vhf radio telephone.

Decca equipment comprises 450 Automatic Pilot, 350T Track Plotter, and Mk.12 and Mk.21 Navigators with dual station plotter-receiver switch.

Tenfjord 115 steering gear is coupled to the boat's autopilot, and other fittings in the wheelhouse include Bostrom Viking 300K helmsman's chair, Morse engine and winch controls, Kent Clearview window screen, Alan Haigh lighting switchboard, plus alarm panels for the Tecaid fire detection system and bilge level warning system.

The galley, arranged in the deckhouse, is fitted with a Kempsafe oil-fired cooker and an Electrolux fridge.

All the external and internal steelwork aboard the vessel is treated with Metalife corrosion systems and paints.



Fidelis II, seen (above) on a foggy day in Peterhead, has landed several very good catches under Skipper Stewart Buchan. She has topped 400 boxes.

Most of the wheelhouse equipment aboard *Fidelis II*, including echo sounders and Wesmar sonar, have been supplied by Marconi.

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International Fisheries Exhibition of 1883

HARRY BARRETT looks back to when fishing shows really put on the style*

NO DRAUGHTY, flapping tents. No warm beer in plastic cups and not a portable loo in sight. For this was not the here today and gone five days later modern fishing show that we have come to expect.

What we are talking about is the biggest and most splendid fishing show on earth — The International Fisheries Exhibition of 1883. The setting was the exotic Kensington Gardens in London and over one million visitors came during the four-week run.

As befitted such a grand occasion, Her Majesty Queen Victoria was to perform the opening ceremony "but an unfortunate accident deprived her of the opportunity". However, the show did not have to go far down the Royal scale for a stand-in — the Prince of Wales took over.

Salute

A description of the scene at the time says: "There stood at the salute companies of the Queen's Watermen, 400 representative fishermen from all parts of the kingdom, costumed in their jerseys and sou'westers, their overalls and sea-boots, precisely as they would be when daring the perils of the deep.

"The salmon fishers of Dumfries wore white jerseys striped and starred with blue, with a red salmon embroidered on their bosoms. A deputation of fisher-women and girls from Scotland, France, Belgium and Holland, in their picturesque native costumes, lent further animation to the scene".

The exhibition was also a big financial success, showing a profit of £15,243. At the direction of the Prince of Wales, £10,000 was invested from the surplus for assistance to fishing families who lost a father or husband at sea. A further £3,000 was given to the establishment of a Fishery Society which would help the poor conditions under which fishermen worked and the problems of fish supply.

The exhibition also brought forth from the Government a promise that main zoological stations would be set-up to bring Britain into line with other fishing countries.

Markets

There were some strong words about fish supplies and London prices at the 50 conferences which took place during the exhibition. As the magazine *Punch* pointed out: on one particular day cod was selling for 3d. a pound in the new Central market while, in the West End, it was being marked-up at 18d.

There is no doubt that the exhibition achieved much more than just the hard commercial sale of fishing gear. Its aim was to get the public interested in fish and fishing.

Two fish markets specially constructed on the site were doing big business providing visitors with the opportunity to buy their supper. A typical fisherman's cottage also conveyed to the public something of the life-style of the men who catch fish.

In the "Cheap Fish Dinners" saloon, a meal was on offer for 6d: "Fourpen'uth of fish, a pen'uth of p'taters, and a pen'uth of bread".

The international label put on the exhibition was certainly no overstatement. Russia, China, Spain, United States, Chile, India and Japan were among the national displays put on by almost every fishing nation of importance. In keeping with the grandeur of the setting, each country

Turn to page 91

This section of the 1883 exhibition was named The United States Court.

*This article is based on a book *The Fisheries of the World*, published in 1883 by Cassell & Co. Ltd.

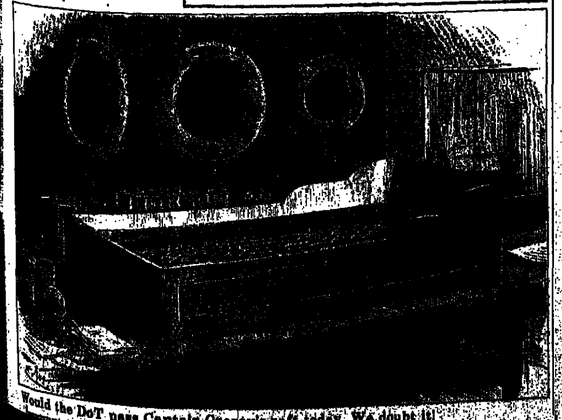
Medal pass

A MEMENTO of the 1883 exhibition turned up recently at the well known refrigeration firm of J. & E. Hall in Dartford, Kent.

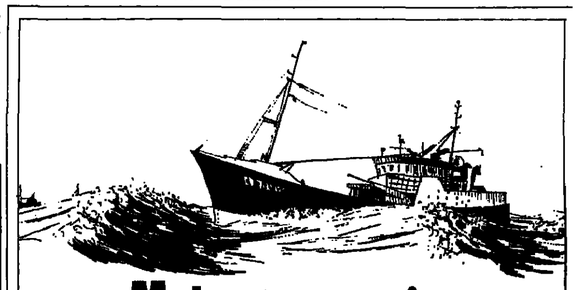
This was a medal struck for the occasion, which was provided as an exhibitor's free pass.

Although refrigeration was hardly in vogue at the time, J. & E. Hall told *Fishing News* that they were the first people to look at the marine application for refrigeration.

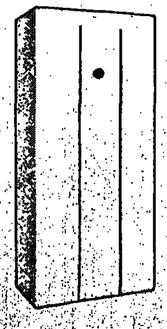
Dim recollections of what could have been on display pointed to an early form of compressor, based on French design.



Would the DoT pass Captain Cressy's raft today. We doubt it!



Make your own ice and freeze one cost of fishing



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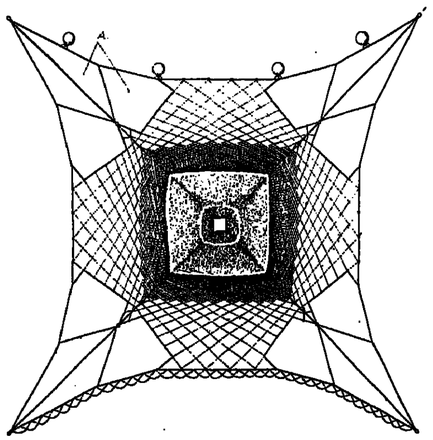

Trawl seen from the front.

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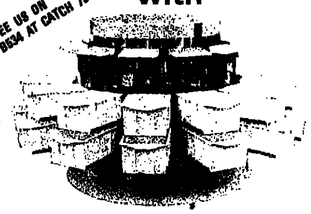

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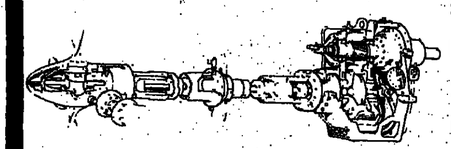

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Exhibition of 1883

From page 89

was designated its own 'Court'.

The atrocious casualty rate among fishermen meant that safety equipment, however rudimentary, was a big feature at the exhibition.

Automatic release systems for lifeboats when lowered into the sea were being developed by several manufacturers, but it was a system from the firm of Sample and Ward of Blyth, Northumberland, which was said to "bear the palm off from all competitors." Using a system of cranks and rods, the hooks which lead the boat to the davit became disengaged immediately it hit the water.

The "Whitby Buoy" also looked to be a great source of sustenance to fishermen in distress. This was listed as containing flags, whistle and a flask for stimulents — plus being able to support four persons in the water.

Navigation buoys on display were little short of floating gasometers. The giant Pintsch's Patent Gas Buoy was fitted with a huge lamp, which after one charge of gas was claimed to be visible up to six miles for three months.

For sheer practicality, the patent raft invented by Capt. Cressey R. N. and featured on the stand of Steedman and McAllister of Glasgow must have taken some beating. Basically a bed cot, this piece of ships' furniture doubled-up as a liferaft claimed to be capable of keeping several people afloat in the water.

Frame

It was based on a rectangular open wooden frame and the bed-come-raft had corrugated wire strung across it, except at the centre where an opening was left. The opening was crossed with straps which could easily and quickly be loosened. Flotation was provided with a cork lining on the frame.

Entry on to the raft was through the middle opening which necessitated pushing the raft down on one side, allowing it to cant up and fall over the head or shoulders.

The beam trawl was sweeping all before it in the North Sea. At the fishing conferences, held in conjunction with the exhibition, some scientists were beginning to worry about the efficiency of this method and its effect on the stocks (shades of today).

Gear designers began to get the message and the appearance of a beam trawl and net, aimed at reducing damage to the seabed and letting small fish escape, was received with great interest.

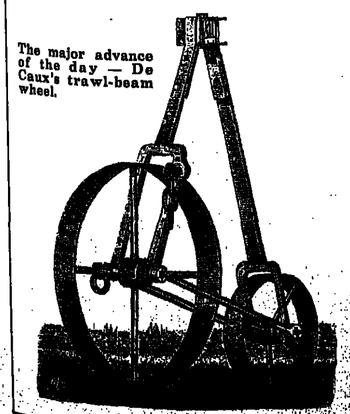
One such model developed by a Mr. De Caux was described thus: "It not merely runs on wheels instead of dragging and crushing everything that impedes its progress, but it is provided with a number of ingenious contrivances to secure the large fish and let the miniature fish escape. Further, the net can at pleasure be disconnected from the beam at the sea-bottom, shut up, and brought to the surface separately from the latter."

Although, on the surface, the exhibition was full of pomp and ceremony, there was a good deal of political strategy involved. Then producing some £25m. a year in fish, the North Sea was a goldmine to the fishing nations of Europe. In the past Britain had been accused of giving it away to France and Holland.

The staging of the exhibition was designed as a springboard for a new policy on fishing which would bring Britain to dominate Europe.

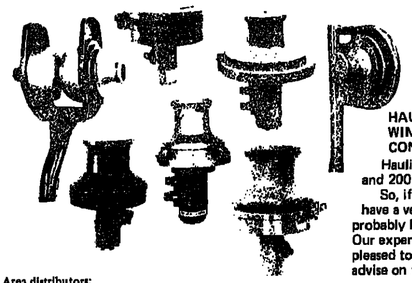
There is no doubt that, in the years following the exhibition, Britain became a power in European fishing. The trouble now is that history is repeating itself and we look like giving it all away again.

Fish was sold to visitors at the fish market.



The major advance of the day — De Caux's trawl-beam wheel.

A RANGE TO REMEMBER.



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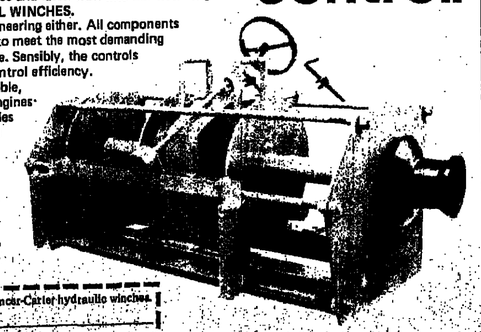

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PROTECTION—WHY NOT A 'BLUE LAMP' NAVY?

A NEW 'Blue Lamp' naval protection service on the Norwegian pattern could relieve the Royal Navy of its fisheries and offshore protection task.

Professor Watt, while in no way denigrating the effort put into protection duties by RN personnel, strongly criticised the equipment and facilities with which it is required to carry out this task.

This has been highlighted since the 1976 proclamation of the 200-mile UK limits which added over 250,000 square miles of sea to the waters previously patrolled under the 1964 Continental Shelf Protection Act.

Closer supervision of about 60,000 square miles inside the 50-mile coastal zone, from which it is proposed that all foreign fishing boats are to be excluded, will impose a still further burden on the existing protection force.

For this task, the Flag Officer, Scotland, has a squadron comprising only 16 ships — the 'eight-ton' class minesweepers (with or without Prince Charles), two 'Bird' class patrol boats, five of the newer 'Island' class boats, and *Tenacity* (not all of which can be at sea at once).

Added to these are the 'Scottish Navy' of five unarmed ships run by the Department of Agriculture and Fisheries for Scotland, and the four Nimrod aircraft based on Kinloss and Maugam — one for each fishing zone.

Professor Watt emphasised that, at a time when Britain's Navy has been allowed to run down and when officers and men of all the armed forces are leaving the services, the task of protecting our maritime property and resources has grown vastly in both area and difficulty in recent years.

As a result, the Navy's resources which can be devoted to this task are desperately overstretched and quite inadequate for the job.

Contemplating what it is now required to do and the instruments with which it is asked to do it, he said, 'it is impossible not to feel both admiration and despair — admiration for the effort being undertaken as well as for the persistence with which that effort is defended; and despair as to the chances of any really adequate action being taken.'

RN forces, Professor Watt suggested, should be relieved of fisheries and offshore protection duties and returned to their traditional task of defending seaborne trade and generally policing the coasts and oceans.

A new force, the 'Blue Lamp Navy,' should be created specifically for the job of fisheries protection and keeping watch on offshore structures.

Taking into account the extension of our fishing limits and the enormous investment in the offshore oil industry, he accused the Government of assuming massive new commitments without making remotely adequate allocations of funds to cope with them.

Relieving the Ministry of Defence and the RN of protection duties need not, in his opinion, leave Britain's fisheries and fishing fleets without the protection they need and deserve, says Professor Watt.

There is, he pointed out, no Admiralty monopoly of seagoing craft in the service of the Crown and protection could be afforded — and on a larger scale so far as sea coverage is concerned — by utilising to the full the larger number of vessels already owned and operated by other Ministries and their various departments concerned in fishories and offshore work.

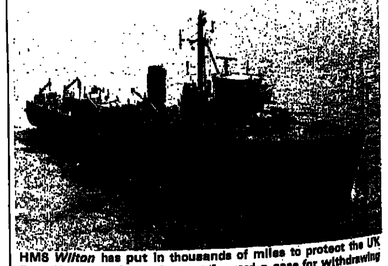
He gave details of six ships run by the Sea Fisheries Inspectorate of the Scottish Office's Department of Agriculture and Fisheries; another 20 or more research vessels of various sizes in the control of the National Maritime Institute, the National Environmental Research Council of the Department of Education and Science, and the Ministry of Agriculture, Fisheries and Food; and there are also vessels operated by HM Coastguard as well as the revenue cutters of the Customs and Excise Waterguard.

Many, if not all, of these craft would be suitable for fisheries protection duties at appropriate distances from the coast.

From them the nucleus of a Blue Lamp Navy could be formed. The adoption of such a force need not meet high RN standards of construction, manning, armament, highly sophisticated electronics and so on, but would thus be considerably more economical to build, man and maintain.

This is not to say that Blue Lamp seamanship standards would be lower: in fact crews could be largely recruited, according to Professor Watt, from fishermen unemployed through the decline of Britain's deepsea fishing fleets. As a civilian service, it would be unarmed but uniformed, acting mainly in an observe and report role, but with authority to arrest if need be and the ability to call in armed Naval help in the event of violent resistance by an offender.

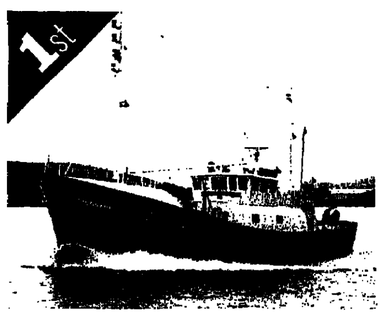
Funding of a Blue Lamp Navy should not, the professor considers, be covered in the Defence Vote as is that of the RN. Instead, it would have its own budget contributed to by the relevant Ministries responsible for legislation and administration for Britain's marine industries.



HMS *Wilton* has put in thousands of miles to protect the UK fleet. Now a professor has put forward a case for withdrawing the Navy.

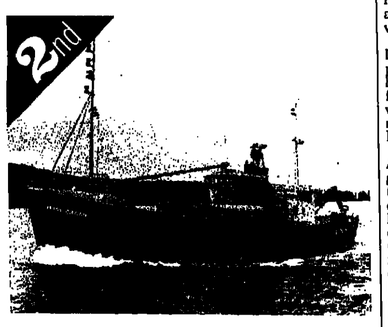
It's a Campbeltown Hat-Trick!

1st



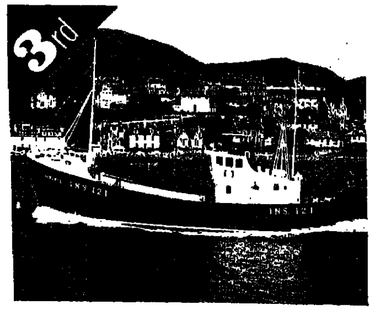
▲ The top Scottish seiner during 1977, Argonaut IV, a Campbeltown 80 built for Skipper David Smith of Anstruther.

2nd



▲ Runner-up in the annual league table for gross earnings, Mary Crown, a Campbeltown 75 built for Skipper Tommy Sutherland of Hopeman.

3rd



◀ In the reckoning again, the 1976 top seiner Kestrel, a Campbeltown 80 built for Skipper Ian Sutherland of Hopeman.

Together, these three vessels grossed more than £1 million during the year.

They, and many other winners, are all based on the yard's range of standard steel hulls from 50 to 120 feet.

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BELGIAN WARNED

ONLY a few days after the French trawler *Cassel* was brought into Lowestoft and her skipper ordered to pay nearly £1,500 in fines and costs for two net offences a Belgian trawler, *Triton*, has been escorted into the port.

She was brought in on Wednesday night (last week) by the fishery protection vessel, HMS *Shavington*, but no legal action was taken.

"She was given a formal warning about the mesh size of one of her nets and was allowed to sail," said Lt. Cdr. Geoff Thorpe, district inspector of fisheries.

HMS *Shavington*, Commanded by Lt. Cdr. R. J. Martin, sent a boarding party to the 70-ft. beam trawler when she was observed with a number of other fishing craft about 16-miles off Orford.

Skipper Bob McQueen had an outstanding trip of 398 kits worth £11,748 with *Ella Grethe*.

Holiday hangover hits Grimsby

TRAWLER owners at Grimsby must really be wondering when their current run of misfortunes will end. Two distant water ships were laid-up after reasonable trips last week and half the middle water fleet ended up well in the red from tiny catches. Ships which did have heavy catches saw much of it go unsold or to the salters.

To cap it all the Belgian trawler *Belgian Lady* — landing Icelandic wet fish at the port for the second time this year through A. E. Richardson — managed only a £32,138 grossing from 992 kits (cod plus a little haddock). She had topped £60,000 from her last visit albeit with more kittage.

This post Spring Holiday hangover fortunately was nowhere near as apparent among the North Sea seiners and pair teams and quayside prices generally, especially for codstuffs, did hold almost to the levels of previous weeks. Nevertheless, there were disappointments in this section as well.

Top tripper

Easily the four-day week's top tripper was Consolidated Fisheries' *Barnsley* (Sk. Pat Blany) which clocked-up £36,769 from 1,177 kits, including 900 of codstuffs and 100 of coley, after 24 days on the Norway coast and White Sea.

Barnsley was well clear of sister-ship, *Notts Forest* (Sk. 'Cocker' Mussell), on £28,927 from 928 kits, again mostly cod, from a similar 24-day trip.

Because Consolidated has now lost three of its four north-east Arctic licences, both vessels were laid-up for an indefinite period at the end of these trips.

Middle water landings from the trawlers were terribly low at the beginning of the week. H. L. Taylor's *Nanao* had the doubtful distinction of the week's worst trip with just 300 kits of mixed fish which sold for a miserly £8,051 after a 16-day Westerly voyage. Consolidated's *Real Madrid* (Sk. Frank Gilchrist) got in one of the few good trips with a grossing of £19,001 largely from cod, haddocks and coley after 16 days.

BUT's *Ross Kipling* (Sk. John Roberts) hit the high spot in this section, being well clear of runner-up *Real Madrid*, with £26,198 from a turn out of 1,272 kits. This included a huge haul of coley and sullocks. *Ross Kipling* made this fine tally in spite of losing 223 kits of coley to the salters at £14 per kit.

Disaster

Sister-ship *Ross Kashmir* (Sk. Pat Philipson) turned in a similar 15-day Westerly/North Seas effort with a landing of 1,265 kits, but it ended up in disaster with 310 kits unsold, 232 to the salters and a wretched grossing of £14,685.

The John R. (Fish Salesmen) Ltd. agency had the rare honour of managing both the top seiner and the top pair team.

Skipper Bob McQueen in *Ella Grethe* was in a class of his own with a superb 16-day cod trip worth £11,748 from 398 kits — £3,000 better than his nearest rival. Skippers Bob Collins and David Buley in *Ann Charlotte* and *Sonia Jane* completed the double with combined figures of £26,200 from 872 kits of cod.

New exit for fish market

THE BRITISH Transport Docks Board is to build a new road exit from Lowestoft fish market into Hamilton Road to ease mounting traffic congestion.

At present all road traffic from the fish market and outer docks uses one exit, only a short distance from the harbour bridge and town centre.

The new road exit will cost £63,000 and Waveney district council says it will contribute towards the cost provided "other interested parties" do the same.

'SWIFTSURE' MAKES SURE

FISHERMEN in Plymouth had a grim reminder last Friday of where the port's top priorities lie. Their craft, together with all other vessels in the Sound, were ordered by the Royal Navy to stay exactly where they were. . .

For two hours the port was closed down. The reason? A blanket of thick fog had descended — just as the deadly nuclear submarine, HMS *Swiftsure*, returned to her base at Devonport.

Small boats without radios were warned to stay put by Ministry of Defence police launches and Devon's Emergency Services HQ at Exeter was put on red alert.

The Queen's Harbourmaster issued the order halting the movement of all vessels, but would not give an explanation to reporters.

A Navy spokesman said the restraints were made under the Port of Plymouth Act because the harbourmaster considered visibility to be poor, and that it would be prudent to close the port.

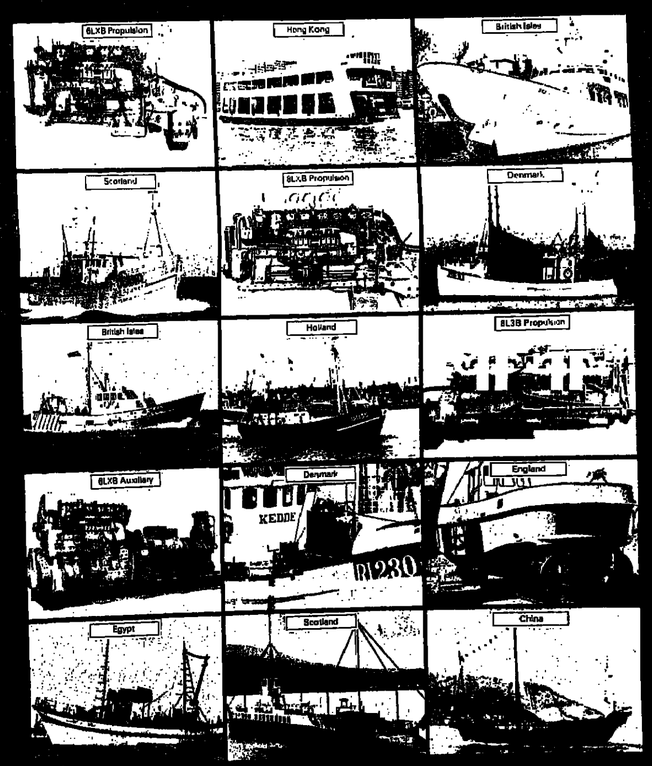
"Safety is paramount where nuclear-powered subs are concerned," he added.

There were numerous complaints about the action.

Cold store

FISHERMEN at Killala, County Mayo, want cold storage facilities in the port from which 22 boats now operate.

They have asked Bord Iascaigh Mhara to look into the matter and are contacting the local authority about having a light fitted on the pier. One man died after a fall on the quay wall there.



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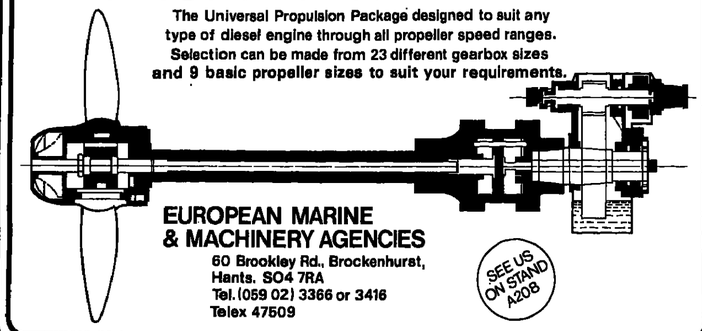

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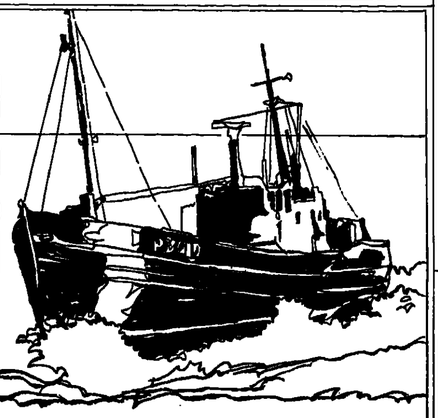

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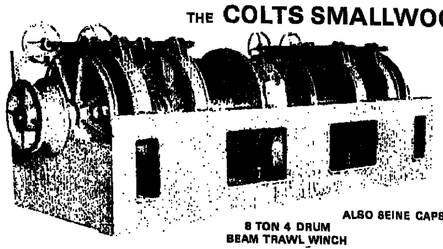

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Fishermen count the cost of lost grounds

OIL AND GAS developments in the North Sea could cut fishermen's earnings by up to £8m. in the ten-year period ending 1986. A report by Aberdeen University, commissioned by the Scottish Fishermen's Federation and the British Fishing Federation, shows that encroachment by the oil industry on fishing grounds has become a problem which will continue to increase.

North Sea fish - oil report goes to the top

The report estimated that loss of access to fishing grounds could be costing the fishing industry up to £460,000 a year and may rise to £600,000 by 1986.

A big worry for fishermen has been getting the Government to recognise that there is a problem. The publication of this report is seen as convincing evidence to support the many fears that have been expressed about the spread of gas and oil work into areas of fishing.

Government Ministers are now considering the report and are expected to call a meeting with both federations shortly.

While there had been some progress made in setting up the Fisheries and Offshore Oil Consultative Group, "no headway had been made at all with the Government on compensation for loss of access," said BFF Scottish vice-president, David Craig, when introducing the report last month.

The Government has maintained that, the law being what it is, there is no case for compensation for loss of a public right.

On the other hand, said Mr. Craig, the oil industry takes the view that as they pay for the areas they operate in, there is no onus on them to pay compensation.

"Being the realists that we are, we have recognised that we must live with the oil industry. But having said this, we do not accept that we should be the principal sufferers of oil development," added Mr. Craig.

For the purposes of the report, three main areas of development were seen as causing loss of access: pipelines; rigs and platforms; sub-sea completions and suspended wellheads.

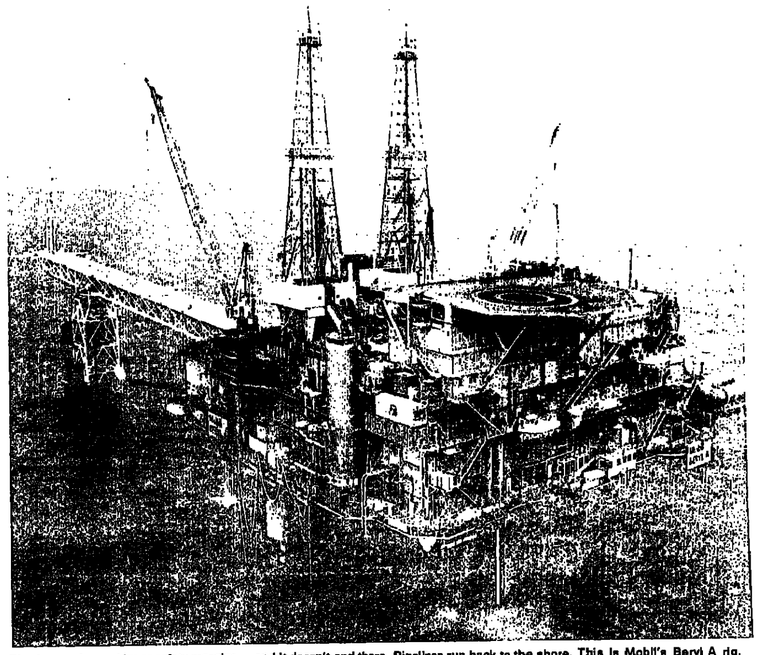
The task of calculating fishing losses was relatively easy when it came to the rigs; these are surrounded by 500 metre safety zones. The situation is not so cut and dried when it comes to fishing near pipelines. Estimations had to be made, based on the knowledge that fishermen for many reasons have to steer clear of pipelines.

There seems to be division of opinion on whether it is safe to trawl over pipelines.

It was the difficulty in assessing losses due to pipelines that produced such a wide range in the estimated present loss of earnings which were given as a minimum of £50,000 and a maximum of £460,000 a year.

The report warns that, over the next decade, gas and oil developments will mean an estimated 25-30 per cent increase in the physical area lost to fishermen in the North Sea. These losses will be concentrated in two main areas — the Moray Firth and the East Shetlands.

Aberdeen University regards this report as only the start.



Big rigs need even bigger safety margins — and it doesn't end there. Pipelines run back to the shore. This is Mobil's Beryl A rig.

...claim backed

COMPENSATION should be paid for loss of access to fishing grounds through oil developments in the North Sea. This backing for fishermen came in the House of Commons Expenditure Committee's report on the fishing industry published last month.

There is a case for compensation where quantifiable and attributable loss can be demonstrated, noted the report.

The oil industry was urged on to 'err on the side of generosity' when it came to compensation claims — which should be paid out promptly. MPs said it could be argued that the oil industry was in a better position to stand a loss than fishermen.

The report also urged that safety zones around rigs should not be larger than necessary.

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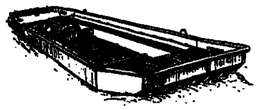

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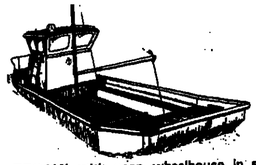

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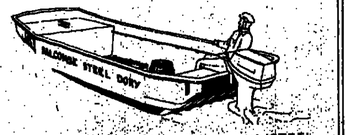

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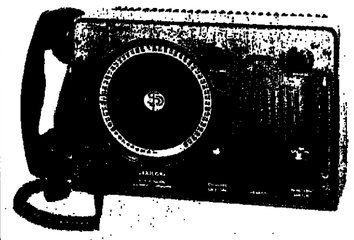

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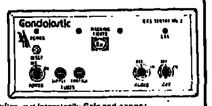

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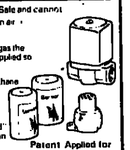

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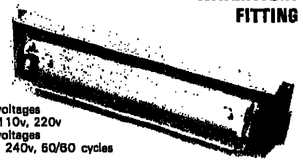

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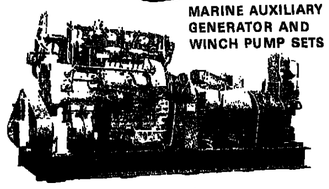

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Catches and Prices

TOP LANDINGS LAST WEEK

GRIMSBY

Distant water

£36,769: *Barnsley*, Consol (Sk. P. Blaney), 1,177k, WS, 24 days.
£28,927: *Notts Forest*, Consol (Sk. G. Mussell), 925k, WS, 24 days.
£17,632: *Prince Philip*, Boston (Sk. E. Grant), 677k, WS, 23 days.

Middle water

£26,198: *Ross Kipling*, BUT (Sk. J. Roberts), 1,272k, WS, 16 days.
£19,001: *Real Madrid*, Consol (Sk. F. Gilchrist), 667k, WS, 16 days.
£18,735: *Ross Leopard*, BUT (Sk. J. Brown), 712k, WS, 15 days.
£18,609: *Ross Jaguar*, BUT (Sk. D. Speck), 639cwt, WS, 16 days.
£18,509: *Ross Jaguar*, BUT (Sk. D. Speck), 639 cwt, WS, 16 days.
£14,655: *Ross Kashmir*, BUT (Sk. P. Phillipson), 1,265 cwt, WS, 18 days.

North Sea

£12,711: *Lepanto*, Lindsey (Sk. S. Davidson), 375 cwt, NS, 13 days.
£7,042: *Lemberg*, Lindsey (Sk. H. Pexman), 232 cwt, NS, 13 days.

Seiners

£11,748: *Ella Grethe*, John R. (Sk. R. McQueen), 396k, NS, 16 days.
£8,712: *Helen Mona*, Hamling (Sk. A. Svendsen), 285k, NS, 14 days.
£7,934: *Edlei*, Danbrit (Sk. L. Gravesen), 260k, NS, 15 days.
£7,783: *Edith Borum*, Danbrit (Sk. G. Hoban), 216k, NS, 16 days.
£7,752: *Karen*, Hamling (Sk. E. Sveinsson), 228k, NS, 14 days.
£7,550: *Frederiksborg*, Sleight (Sk. G. Mussell), 235k, NS, 12 days.
£7,430: *Arnborg*, Consol (Sk. V. Dam), 304k, NS, 16 days.

Pair teams

£13,549: *Sonia Jane* (Sk. D. Buley), 454k, and £12,651: *Ann Charlotte* (Sk. R. Collins), 418k, both John R, NS, 16 days.
£12,176: *Halton* (Sk. T. Turnbull), 423k, and £9,403: *East Bank* (Sk. G. Hall), 315k, both Sleight, NS, 13 days.
£10,957: *Limanda*, Consol (Sk. D. Rose), 380k, and £9,455: *Taarnborg* Danbrit (Sk. J. Hill), 331k, both NS, 13 days.
£7,574: *Dawn Waters* (Sk. C. Spall), 292k, and £6,982: *Ashby* (Sk. G. Tyrell), 236k, both, Sleight, Flugga, 18 days.

HULL

£39,629: *C. S. Forester*, Newington (Sk. R. Taylor), 1,455 k, NC, 25 days.
£17,258: *Arctic Vandal*, Boyd (Sk. M. Trott), 877 k, W, 15 days.

FLEETWOOD

Homewater

£20,533: *Kereon*, (French), 702 k.
£19,657: *Boston Stirling*, Boston (Sk. W. Bridge), 735 k, 15 days.
£16,006: *Luneda*, Marr (Sk. G. Wignall), 586 k,17 days.
£12,949: *Ella Hewett*, Hewett (Sk. D. Reader), 456 k, 18 days.
£7,764: *London Town*, Hewett (Sk. J. Buckley), 247 k, 15 days.
£6,413: *Marrie Jacob*, (Irish vessel), 50 k.
£2,428: *Royalist*, Hewett (Sk. A. Bedford), 72 k, 14 days.

ABERDEEN

£20,962: *Pindarus*, BUT (Sk. J. Glasgow), 1,124k, S, 14 days.
£17,219: *Ben Gairn*, Irvin (Sk. C. Grimmer), 585k, F, 14 days.
£15,819: *Clarkwood*, Wood (Sk. S. Thomson), 468k, F, 13 days.
£12,547: *Glen Carron*, Marr (Sk. G. Reddington), 441k, S, 12 days.
£11,972: *Grampian Prince*, N. Star (Sk. J. Forbes), 497k, West Side, 16 days.
£11,602: *Mount Royal* (Sk. A. Reid), 357k, S, 8 days.

LOWESTOFT

£15,818: *Boltby Queen*, Talisman (Sk. A. Gill), 499k, NS, 13 days.
£15,057: *St. Georges*, East Coast (Sk. J. Gallaher), 470k, NS, 8 days.
£14,156: *Boston Sea Knight*, Boston (Sk. A. Lincoln), 527k, NS, 8 days.
£12,903: *Barnby Queen*, Talisman (Sk. C. Craig), 458k, NS, 11 days.
£12,253: *Boston Mariner*, Boston (Sk. J. Williams), 415k, NS, 12 days.
£11,761: *Suffolk Challenger*, Hobson (Sk. D. Atkins), 419, NS, 12 days.

NORTH SHIELDS

£5,992 *Ben Chourn*, Irvin (Sk. T. F. Jamieson), 14,060kg, NS, 10 days.

Under 80 ft.

£7,495: *Lothian Rose*, Irvin (Sk. R. Clark), 18,515kg, NS, 3 days.
£6,460: *Airbourne*, Caley (Sk. J. Dougal), 14,784kg, NS, 2 days.
£6,138: *Starella*, Irvin (Sk. T. Johnson), 13,910kg, NS, 2 days.
£6,053: *Supreme*, Caley (Sk. A. Craig), 13,367kg, NS, 2 days.
£6,037: *Mayflower*, Caley (Sk. D. Stuart), 13,502kg, NS, 3 days.

GRANTON

£13,578: *Arctic Challenger*, Liston (Sk. K. Grubb), 964cwt, NS, 16 days.
£13,342: *Arctic Attacker*, Liston (Sk. B. McPherson), 713cwt, NS, 12 days.

MILFORD HAVEN

£4,546: *Rosevear*, Norrard (Sk. J. Manson), 126 k, Irish Sea, 13 days.
£3,790: *Bryher*, Norrard (Sk. A. James), 94 k, Irish Sea, 14 days.
£3,626: *Picton Sealion*, Norrard (Sk. T. Salter), 100 k, Irish Sea, 13 days.

KEY: BI Bear Island; BS Barents Sea; DW distant water; F Faroe Islands; G Greenland; HW home water; I Iceland; IS Irish Sea; NC Norway Coast; NFL Newfoundland; NS North Sea; O Orkney; R Rockall; S Shetland; W Westerlies; WC West Coast; WS White Sea; Sk Skipper; k kits; c cwt; kg kilo.

HUMBER VESSELS DUE

GRIMSBY

Expected during the week from Faroe and Westerly: *Kyoto, Nanao, Ogano, Real Madrid, Ross Clivet, Ross Kelly, Ross Kelvin, Ross Tiger, Ross Panther, Ross Zebra* and *Tokio*.

HULL

Provisionally expected during the week from White Sea: *Ross Sirius*.

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PORT MARKETS

FRIDAY, JUNE 2

DUBLIN

450 boxes mainly from Howth and Killybegs met a good demand. Main varieties were ray and mackerel. Prices: salmon, £1.70/£1.90; lobster, £1.50/£2.85; prawn, 12p/83p; white sole, 6p/7p; black sole, £1.20/£1.25; slips, 40p/45p; brill, 17p/24p; cod, 24p/27p; whiting, 20/22p; haddock 18p/27p; large plaice, 8p/35p; *per lb*; round whiting, £12/£17; ray, £8/£20; mackerel, £4/£10; *per box*.

MONDAY, JUNE 5

GRIMSBY

A good supply of 5,767 kits from 21 boats met a fair demand. Prices: shelf cod, £3.40/£3.70; codling, £2.20/£3.20; shelf haddock, £3.80/£4.30; medium, £3.20/£3.80; small, £2/£3; large plaice, £4/£4.30; medium, £3.50/£4.50; best small £3.60/£4.30; large skinned dogfish; £8; medium, £6; lemon sole, £6; medium, £5; saithe, £1.40/£2; *per stone*.

HULL

2,462 kits from two distant water vessels. Price ranges *per 10st. kit*, heads on: shelf cod, £24/£42.50 (average £32.16); shelf codling, £20/£36.25 (£27.15); shelf haddock, £31.75/£42.75 (£35.65); coley, £17.50/£18.50 (£17.80); herring, £15.25/£19.60, (£18.70). No distant waterplaice, halibut, bulk codstuff or haddock.

FLEETWOOD

Prices: lemon sole, £26/£32; megrims, £23; English cod, £25/£39; plaice, £24/£48; mixed haddock, £28/£44; conger eel, £18/£20; ling, £21/£26; hake, £55/£62; coley, £13/£20; dogfish, £11/£18; monkfish, £33/£35; roker, £15/£26; whiting, £22/£31; *per 10 st. kit*.

LOWESTOFT

Three vessels landed 1,019 kits. Prices: large turbot, £140/£150; small, £70/£75; lemon soles, £40/£53; large plaice, £38/£39; medium, £36/£44; small, £28/35; cod, £25/£35; codling, £20/£32; large haddock, £28/£30; small, £14.50/£22; catfish, £20/£24; monkfish, £60; all per *10-stone kit*.

MILFORD HAVEN

216 kits from two boats. Prices: large cod, £33; medium, £36; codling, £34/£35; large plaice, £40; medium, £36; small, £13/£16; turbot, £109; whiting, £13/£14; lemon sole, £14; Dover sole, £140; slips, £120; tongues, £55; brill, £50; large ray, £36; medium, £28; small, £21; dogfish, £15; squid; £39.50; *per 8 st. kit*.

NEWLYN

Prices: large mackerel, £2.30; large, medium; £1.50; small medium, £1.50; small, £1; large megrims, £3.50; small, £2.20; large pouting, £3.10; small, £1.50; large ray, £5.30; large medium, £3.50; medium, £2.50; small, £1; large dabs, £3.40; small, £2; large pluice, £4.80; medium, £4.50; small, £3; large hardback, £4.80; large conger, £4.20; medium, £3; small, £1.50; large Dover sole, £17; medium, £18.50; small, £10; squid, £8.50; small skate, £5.40; large, £1.40; cod, £3.50; pollock, £3; ling, £2.60; large hake, £9.50; medium, £8; small, £5; large brill, £9.80; medium, £8.80; large John Dory, £13; medium, £8; small, £3; large dogfish, £2.20; medium, £1.80; coley, £1.55; large monkfish, £11.30; medium, £9.50; small, £6.50; medium whiting, £3.50; small, £1.80; gurnards, £1; large lemon sole, £8.50; medium, £5.80; small, £3.60; *per stone*; bass, £1.25; *per lb*.

ISLE OF MAN

Prices: herring, eight boats landed 51 units fetching from £29.90 to £44.20 *per unit*.

TUESDAY, JUNE 6

ABERDEEN

250 tonnes from 11 boats, from North Sea. Prices: mackerel, £7; cod, £25/£26.50; large codling, £22.50/£29; medium, £23.50/£26; small, £18/£22.50; ling, £17/£18; tusk, £12; hake, £32/£40; saithe, £8.20/£14.20; large haddock, £29/£36; medium, £26/£35.20; small, £18/£30.80; whiting, £8/£25.60; plaice, £12.50/£33; *per cwt.*; halibut, £9/£14; *per stone*; salmon, £1.90/£2.15; grilse, £1.62/£1.91; trout, £1.25/£1.50; *per lb*.

NORTH SHIELDS

Prices: large cod, £21.25/£21.75; medium, £22; selected medium, £18.50/£20.50; selected small, £12/£17.25; small, £6.30/£15; large and second haddock, £23.50; medium, £16.25/£20.50; small, £8.50/£11.50; small whiting, £5/£7; large lemon sole, £30/£40; medium, £22/£33; small, £9/£20; large plaice, £20; medium, £21/£24; small, £15/£17; large dogfish, £17.25; medium, £9.75; *per 40 kilo unit*.

June 9, 1978

PETERHEAD

5,354 boxes from 18 boats. Prices: cod/codling, £2.60/£3.70; £1.70/£2.10; monkfish, £4.50/£4.70; catfish, £2.30/£3.50; ling, £2.10/£2.30; plaice, £2.50/£3.80; *per stone*; large haddock, £28.50/£31.50; selected, £21.50/£23; small, £16.20/£19.50; *per box*.

FRASERBURGH

430 boxes from 19 boats. Prices: selected lemon sole, £4.30/£4.80; small, £2.50; dabs, £1.20; lemon plaice, £4.20; medium, £3.30; *per stone*; large haddock, £28/£29; selected, £22/£26; small, £19/£22.50; selected, £22/£26; small, £19.22; cod spraps, £23/£25; round whiting, £14.50/£16; gutted whiting, £17/£18; *per box*.

WICK

265cwt from 11 boats. Prices: cod/codling, £15/£19; haddock, £19.60/£24; whiting, £14/£18.60; plaice, £19; lemon sole, £24; dabs, £9; *per box*.

BUCKIE

90 boxes from six boats. Prices: cod, £3.60; small codling, £3.20; large haddock, £3.60; medium, £3.50; selected small, £3.30; small, £3.20; medium plaice, £3; small, £1; round whiting, £1.60; lemon sole, £3; witches, £4; turbot, £12; halibut, £11.60; large prawn tails, £25; small, £13; coley, £1.60; *per stone*.

BRIXHAM

Prices: large cod, £3.80; small, £5.20; large plaice, £4.20; medium, £4.20; small, £3.20; turbot, £14; whiting, £1.40/£1.50; lemon sole, £8.20; large Dover sole, £17; medium, £21; brill, £8.40; ray wings, £5.60; slips, £12; squid, £8; monkfish, £8.50; large dabs, £3.60; small, £2.20; *per stone*.

ISLE OF MAN

Prices: herring, 12 boats landed 129 units fetching from £19 to £46.70 *per unit*.

BILLINGSGATE

ON TUESDAY 193 tons were delivered. Average selling prices on merchants' stalls: salmon, English, £1.90/£2.40; Scotch, £1.90/£2.40; Irish, £1.00/£2.40; Irish grilse, £1.30/£1.90; salmon trout, £1.10/£1.70; rainbow trout, 40p/60p; soles, tongues, 50p/60p; slips, 60p/70p; medium, 90p/£1.85; large, £1.25/£1.35; cels, £1.10/£1.40; foreign smoked salmon, £3; *per lb*; large turbot, £15.40/£17.50; medium, £10.50/£13.50; small, £4.90/£8.40; large brill, £6.30/£8.40; medium, £4.20/£6.30; small, £2.80/£3.50; English plaice, ½lb-1½lb, £4.40; 1½lb-2½lb, £4.90; Dutch plaice, ½lb-1lb, £5.50; 1½lb-2½lb, £5.50; Danish plaice, 1½lb-1½lb, £5/£6.20; large halibut, £12.60/£14; medium, £15.40/£19.60; small, £8.40/£12.60; selected lemon sole, £3.50/£6.50; large witches, £4/£4.75; small, £2.80/£3.50; headless home water cod, £5/£5.50; fillets, shelf cod, £7.80/£9; bulk, £6.50/£8; bream, £9; fillet coalfish, £3.50/£4.20; haddock fillets, £8/£10.50; gibbers, £5.30/£5.50; selected whiting, £2.60; small, £2.20; small English dogfish, £4/£7; large, £8.50/£9.80; mackerel, £2/£2.60; fresh herrings, £4.80/£5.30; London cured dry haddocks, £8; golden cutlets, £9; filleted kippers, £9/£8; selected kippers, £6/£7.80; monkfish (skinned), £8; bass, £14; grey mullet, £3.92; squid, £9; large roker, £7.90/£8.80; medium, £6/£7.20; small, £2.80/£6; red mullet, £14; large conger (gutted), £2.40/£3.80; small (gutted), £1.20/£1.70; *per stone*.

SHELLFISH

SELECTED lobsters, £2.20/£3; unsorted, £1.50/£1.89; crabs, over 3lb, 35p/55p; under 3lb, 25p/45p; small, unsorted, 10p/25p; prawns, 75p/£1; *per lb*; Irish winkles, £10; *per cwt*; whelks, £6; *per bushel*; shrimps, brown, £1.50/£1.80; pink, £1.40/£1.50; English cockles, £2.10/£2.20; *per gallon*.

FROZEN FISH

Pacific salmon, £1.25; Canadian halibut, £1.30; scampi, £1.80/£3.50; snappers, 49p; lum snam, 45p; grey mullet, 43p; herbount, 63p; wong far, 43p; *per lb*; fillets, plaice, £7.50; haddock, £8.75; squid, £5.50; kippers, £7.35; skinned dogfish, £6.60; *per stone*.

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Prevent fungus forming

"PLEASE CAN you suggest a solution to a fungus-growth problem. The hatch to my boat's fishroom has been battened down all winter and has not been ventilated, therefore patches of fungus have formed on the underside of the decking.

"Although the decks are coated with Decolay which appears to be intact, the undersides of the planks are really wet.

"Can you recommend a composition that I can apply to them to drive out the moisture, prevent fungus forming again, and the wood rotting?"

■ I don't know of any composition which would displace the moisture from the planks. I think the best procedure would be to remove the fungus and destroy it; to dry the fish room by ventilating it — perhaps with the aid of wind sails, but not of heating appliances which might cause planks to crack — and then apply a wood preservative.

If the deck planks were calcurised — pressure-impregnated with a copper-chrome-arsenic preservative known as Celcure A — before they were laid you should treat them after the wood has completely dried with a composition known as Celcure B.

They will then be resistant to attacks by fungi.

If the planks were not calcurised, you could treat them effectively with clear or green Cuprinol which you could probably obtain locally and therefore comparatively inexpensively. In fact, any copper napthenate or pentachlorphenol wood preservative would prove satisfactory.

If you are prepared to go to the expense, a first class anti-fungus and anti-rot composition to apply would be a mixture of one or other of those preservatives with a lacquer called Unitrol — a brew compounded from Alkyd and other synthetic resins, active CO_2 inhibitors and moisture-resistant additives.

When Unitrol dries it forms a clear, yellowish film, which, on account of its closed-pore structure and moisture-repelling properties exhibits penetration by water and growth of moulds and fungi.

It will displace water from metal surfaces and penetrate rust not on them.

Celcure B is obtainable from: R. D. (Chemicals and Wood Processes) Ltd., 300 Snaresden Road, Glasgow; Clear and green wood preservatives from Cuprinol Ltd., Adderwell, Frome, Somerset, and Unitrol from Unibond Ltd., Tuscam Way, Camberley, Surrey.

Gill net laws

"I WOULD be grateful if you will send me details of laws affecting the use of gill nets off the north east coast of England."

■ For the most comprehensive and up-to-date information about such laws and regulations, I suggest you go to see or other of your local Fishery Officers.

The Ministry of Agriculture, Fisheries and Food has offices at 13 Union Quay, North Shields, and St. Andrew's Dock Chambers, St. Andrew's Dock, Hull.

Its Fishery Officer for the area between Berwick and Hartlepool has headquarters at the former and its Fishery Officer for the area between Hartlepool and the Humber at the latter.

The White Fish Authority has an office at 37 West Pergy Street, North Shields, which serves as headquarters for its Berwick to River Humber Area Officer.

The Northumberland Sea Fisheries Committee's Chief Fishery Officer has his H/Q at: 14 Woodburn Square, Whitley Lodge, Whitley Bay, and its Fishery Officer for the area between the River Tyne and the boundary between England and Scotland resides at 14 Mayfield, Seahouses.

The North Eastern Sea Fisheries Committee's Chief Fisheries Officer for the area between the River Tyne and the Donna Nook Beacon in Lincolnshire may be located at: 3 The Avenue, Sleights, Whitby, and Fishery Officers for the area at 62 Caledonian Road, Hartlepool; 7 Hindle Drive, Filey, Yorkshire; and 39 Heneage Road, Grimsby.

These officers are responsible for enforcing all laws and by-laws made to regulate fishing off the north-east coast, and any of them will be able to give you the information you want.

Should you at any time require general rather than operational intelligence about laws affecting fishing off the north east coast or other areas, a publication issued by the Food and Agriculture Organization of the United Nations is likely to contain the information you want.

It is FAO Fisheries Report No. 98 and is called *Fisheries Legislation and Administration in the United Kingdom (England and Wales)*. It contains details of no less than 35 Acts which have been brought into force since 1843 and also a great deal of other valuable information about administration of British fishing fleets and fisheries.

You can obtain a copy through your local bookseller.

John Burgess' Log

It is a delight to handle, grips well on the sheaves of a hauler and the amount of wear in the splice is negligible.

Details of the different sizes in which Marlow Multiplait rope is made and illustrated instructions for splicing it to chain are obtainable from Marlow Ropes Ltd., South Road, Hailsham, Sussex.

ANY QUESTIONS?

■ IF YOU have any questions about boats, equipment, gear or methods, John Burgess is always prepared to try and answer them if they are sent with a stamped addressed envelope for reply.

Sinking lures from Sweden

IN ANSWER to a query from a reader *(Fishing News*, March 31) who wanted to know about devices for taking rubber eels down to depths at which pollack are feeding during big tides, I mentioned among others a Swedish 'Surfing' paravane.

This will take lures down to about 16 fathoms when trolling at three to four knots. I said that it was available from a firm at St. Neots in Huntingdonshire but this was not correct.

I have since learnt that this type of paravane is no longer being imported by the firm and that if you want to try it, you will have to import samples direct from A. B. Fixfabriken, Gothenburg, Sweden.

There is also a device from Saundersfoot Marine, The Harbour, Saundersfoot, Pembrokeshire (Dyfed), known as the Ottervane.

What are bay lines?

"I HAVE been told that in the Channel Islands they use 'bay' lines for catching bass in summer. Do you know what sort of lines these are and how they are rigged when fished from the Channel Isles?

■ Bay lines are floating longlines with oval floats spaced every six, 12 or 15 ft. along them and six ft. snoods or branch lines attached at 15 ft. intervals.

I believe hooks are very often baited with pieces of sand eel.

Splicing rope

"CAN YOU tell me if there is any way of splicing three-strand rope to chain so that the join will pass through roller fairleads more easily than an eye-splice round a thimble shackled to the chain?"

■ The only way that I know of to ensure that a rope-chain join will pass easily through fairleads is to use Marlow's eight-strand multiplait nylon rope. It is easy to splice to chain and the diameter of the splice is little larger than that of rope or chain.

If you serve the splice it will be appreciably larger, of course, and for this reason and because sand and grit may get under the servicing to cause wear, it is usually best to leave such a splice unserved. You can then inspect it regularly to check that there is no undue wear in it.

I have used this type of rope spliced to four fathoms of ½ in. chain as an anchor cable for over a year. And it has been in use regularly when anchored on mud, sand, shingle and gravel bottoms.

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Products from many parts of the world will be on display with national displays from Denmark and Norway.

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FS823, dredging, trawling, potting, 22hp Marmaid, Kelvin Hughes MS39, hydraulic capstan, R/T, £4,500. Telephone: New Milton 617999 evenings.

MFV "FORTISSIMO"
LT 187 (G.R.T. 49-29)
Single screw diesel, steel beam-trawler. Built 1961 Holland. Refitted 1976 Lowestoft.
FULL D.T.I. CERT. OF SEAWORTHINESS
L (Reg) 72.7ft. Beam 18.6ft. Depth 8.1ft. Engine 300 bhp Bolnes. Rev/Red box. Radar. VHF. Radio. Sounder. Owned. Complete with nets, beams, travels, etc.
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1976 carvel fishing boat, 25ft. x 9ft. 6in., Lister ST3 20hp., forward wheelhouse, ferrograph sounder, ready for season, lying Poole. Telephone: Wimbourne (0202) 886642 evenings.

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"GOLDEN DAWN" 29ft. x 10ft. x 3ft. 10ins., carvel built, Arbroath 1968, double ender, Lister 36hp, recently fitted aft wheelhouse, newly wired, generator, starter motor, nearly new capstan, sealed deck, complete with VHF, sounder, compass, fishing from Penryn, £5,950 ono, telephone Bransgore (0425) 72997.

PLYMOUTH pilot 18ft., Lister ST2, Seawinch 1000lb clutched hauler, £3,850. Fairways potter 25, Volvo 25hp £11,500 Treeve DS25, Perkins 4236, £6,950 Agusstar 32 £11,950. Plymouth pilot 18ft. Stuart Turner 9Lp £3,575. Ross MacKenzie Brokerage, Holton Heath Industrial Estate, Lytchett Minster, Poole, Dorset, telephone: Lytchett Minster (020 122) 4772 ansafone.

IP23, aft wheelhouse, Volvo MD3B 36hp, nav. lights, licensed 8. Telephone: Thanet 87572 evenings.

FOR sale MFV "Metric Peter" (D481), length 72.10ft., breadth 19.7ft., depth 9ft., built 1967, Gardner 152, Norlau winch, 10 man liferaft, Decca 101 radar MS 20 sounder, Kelvin Hughes VHF., Nimbus radio, all above ship's property. On hire Decca Mk12. Vessel in good condition, survey report available, can be seen any weekend at Howth. Apply John Sugrue, Howth, Dublin.

Inshore fishing boat, 30ft. transit stern, two berth, steel hull, BMC diesel engine, 9ft. beam, 5ft. draft, £2,000, telephone Grimsby 44704.

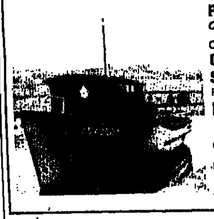
FOR SALE 36ft., sea angling boat 8.84 tons, recently undergone complete refit, now in immaculate condition, all essentials in forward cabin and wheelhouse, 120hp marine diesel with hydraulic gearbox, many extras include, radio telephone, compass, echo sounder, rods, lifejackets, lifebuoys, electric winch, etc. Rigged for small trawl £7,950 or offers. For details and inspection Deganwy Yacht Services Ltd., The Quay, Deganwy (STD 0492) 83868.

FY 104 FV "Snow Drop", 44.4ft. x 13.8ft.x 8ft., pitch pine on oak, Kelvin main engine, Lister wing engine, recently refitted and part converted for living accommodation, £3,000 spent on vessel in last year, suitable fishing/conversion, back to sale? Excellent survey report available, £7,900 ono. Telephone Penryn 73953 (Cornwall) for further details.

M.B. 'Avondale' INS. 201, built of wood 1964 by MacDuff Engineering Co., two liferafts, power block installed by Lossie Hydraulic Co., Decca Navigator Mk. 12, Marconi Echo sounder and Marconi VHF. Overall length 63.4ft., registered 60.1 ft., keel 55ft., breadth 18.6ft., depth 7.8ft., tonnage 39.37, heavy duty Gardner fresh water cooled, hull and machinery in very good condition. Offers to A. K. Sinclair, 20 Graham Place, Stromness, Orkney, telephone Stromness 440.

33ft. Lochin fast fisherman, powered by 210hp Saber diesel, equipment includes Seavoice VHF, Viking Princess VHF, Simrad sounder, Seascan radar, Shortis-Ami compass and repeater, Neco capstan, RFD 10 man liferaft all boat's property. On hire Decca Mk.21. Boat is in excellent condition and ready for work. Price £18,500. Telephone: Worthing 38076.

Silver Fern, overall length 54ft. x 17ft. 8in. x 7ft. 6in., registered tonnage 30. Built 1950 Fairly Yacht Slip, engine 144hp Gardner complete overhaul March 1977 including reduction gear. Boat fitted for trawling and sheaved for scollop, wheelhouse, equipment Decca Mk12, multi-channel VHF, Falklands single side bond radios, Decca 110 radar, Kelvin Hughes sounder, six man liferafts, survey 1978. Offers over £18,000. Telephone: Tarbert 270 or 672.



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FOR SALE BY PRIVATE BARGAIN
M.B. RADIANT MORN FR.22
Built of wood by Jas. Noble (FR) Ltd. Fraserburgh in 1954.
Overall length 72ft. Registered length 68.1ft. Breadth 19.1ft. Depth 8.9ft. Tonnage 52.09.
Caterpillar D343 engine 345 hp, installed 1968 (works overhauled June. 1978. New gear box June 1978.
AVA 1 single cylinder Petters auxiliary engine. Mastra hydraulic combined seine and trawl winch. Rapp 19" power block. Tenford hydraulic steering. Steel w'sleback. Seine rope bins.
ON HIRE: Decca MK.12 navigator. Kelvin Hughes type 17 radar with DRM. Racelon QR 674 VHF radio
BOAT'S PROPERTY: Woodsons Clipper 100 radio telephone. Elac sounder and fishlope
Vessel is equipped for herring pair trawl, seine net and white fish trawl and a quantity of gear will be included in the sale.
The boat is at present lying at Fraserburgh and arrangements for inspection can be made by applying to:-
RICHARD IRVIN & SONS LTD.
Shore Street, Fraserburgh. Telephone: 3102
With whom offers should be lodged before 30th June, 1978.

23ft. x 7ft. 8in., lobster boat, BMC 1.5 diesel. Brit pot hauler, very good condition. Telephone: Aberaeth 2852 evenings.

31ft. Yorkshire coble, unused, fitted Perkins diesel £6,000 ono. Also new coble hulls, ex. stock. Clarkson, Whitby 3408.

MB "LOCH ERISORT" (SY.434)
Built of wood in 1968, overall length 60ft., breadth 18ft., depth 9ft., gross tonnage 36.81.

Kelvin TASS 280hp stepped down to 240hp new May 1977 along with gearbox, six ton Nor-winch with centre barrel. Boat's property: MS29 sounder, coastel radio, Kelvin Hughes radar, watchkeeping receiver. On hire: VHF and Decca Navigator Mk12. Considerable amount of gear to be sold.

Vessel fishing from Stornoway, for arrangements to view contact North Minch Fish Selling Co., telephone: 0851 3358 with whom offers should be placed with by Friday 16th June 1978.

For Sale MFV 'WHITEHILL' B 170
Built of wood Thomson's of Buckie. 1954.
L.O.A. 76ft., beam 19ft. 8ins., draft 10ft. Gross tonnage 71, nett 46.28.
Entine TS6 Kelvin 320hp fitted 1967, completely overhauled mid 1977.
Belt driven Jensen -type 80 winch, Lossie power block. Tenford hand/hydraulic steering, spare prop., Petter auxiliary.
Boat's equipment: Sailor radio and watch keeping receiver, Kelvin Hughes MS 29 sounder.
On hire: Kelvin Hughes type 17 radar, Foreland VHF, and Decca Navigator. Valid DTI certificate.
Also a quantity of trawl gear.

Offers in writing only to: R. Dunnan, 108 Victoria Road, Whitehaven, Cumberland, or to Mr. L. Campbell, "Sea Haven", Mearns Esplanade, Kilkeel, Co. Down, N. Ireland.

Vessel at present fishing and can be inspected by appointment.

FOR SALE BY PRIVATE BARGAIN
MFV "MAIGHDEAN BHAN" (SY193)
Built of wood in 1967 by MacMillans, Fairlie. Length overall 60ft., breadth 20ft., registered tonnage 37.1., engine 240hp Caterpillar D343, Sutherland trawl winch, engine completely overhauled March 1977 and boat re-wired.

Equipment belonging to boat: Sailor radio, fishlope, Kelvin Hughes echo sounder.

The boat is rigged for trawling and a quantity of gear will be sold with the boat.
Best offer secures.
CLOSING DATE 15th JUNE
May be inspected at Isleornsay, Skye. Enquiries to Murdo MacLeod, Isleornsay 270 or 266.

For sale by private bargain
MB OCEAN GAIN SY 82
Built of wood by Gerrard, Arbroath, in 1956.

Overall length 75ft., breadth 20.5ft., depth 9.5ft. Tonnage gross 74.21. Gardner engine 152hp. Boat's property: MS 44 sounder, Rescu-fone, Watchkeeping receiver, Sailor SSB RT, Sailor multi-channel VHF. On hire: Decca Mk 12, Kelvin Hughes 17 radar. Vessel completely rewired 1977 (110 and 24 volt). Steel whaleback, spare propeller, DTI survey will be completed before sale of vessel which is meantime fishing out of Stornoway.

Offers and arrangements for inspection to be made to: North Minch Fish Selling Co., telephone 0851 3358, or Mr. M. Murray, 27 East St., Sandwick, Stornoway. Telephone 0851 2811.

FOR SALE BY PRIVATE BARGAIN
M.B. Heather Girl FR.398
Built of wood by Thomsons of Buckie in 1947. Overall length 52.3ft. Registered length 50.7ft. Breadth 17ft. Depth 8ft. Tonnage, gross 33.83, nett 17.16. Gardner 6L3 Gardner engine 114hp (new pistons and liners 1977). Petters auxiliary engine. Mastra combined seine and trawl winch.

DECCA MRK 21 NAVIGATOR
DECCA PLOTTER } **On Hire**

WOODSONS RADIO TELEPHONE
MARCONI GRAPHETTE ECHOMETER
KELVIN HUGHES TYPE 17 RADAR
KELVIN HUGHES VHF RADIOS (2)
DECCA SIMRAD CA2 FISHSCOPE } **Boat's Property**

The above vessel underwent an extensive overhaul in 1968 including new wheelhouse, fishhold, accommodations and electrical installation. D.O.T. survey completed 1977. This vessel is equipped for trawling and is meantime fishing from Fraserburgh.

Arrangements for inspection can be made by applying to:
RICHARD IRVIN & SONS LTD.,
Shore Street, Fraserburgh. Telephone No. 3102 with whom offers should be lodged.

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Continued from Page 101

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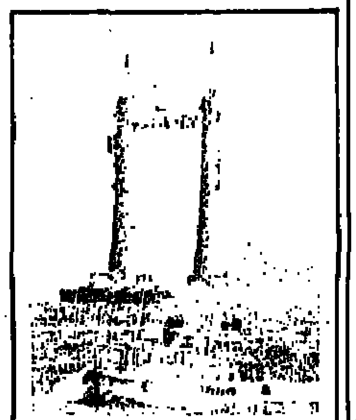

M/V ARGYLL OWL

Built 1964 by Schottel, Netherlands. Dimensions 47ft. x 11ft. x 4.5ft. Construction hull all welded steel, super structure aluminium.
Machinery, main engine 165 bhp Mercedes, new 1970, propulsion Schottel SRP 75/90 new 1977, auxiliary generator Lister, fuel tank 350 gallons, consumption 2 gallons per hour at 14 knots.
Auxiliary equipment Decca radar, Seavoice VHF, echo sounder, 20 man liferaft DTI approved, lifebuoys.
Accommodation bridge mess for 12 persons, toilet and galley.

PRICE £14,500

Apply: Offshore Workboats Ltd., Bemsig, St. Boswells, Roxburghshire, Scotland. Telephone St. Boswells (08352) 2483.

30ft. x 9ft. clinker fishing boat, v.g.c., new wheelhouse, large cockpit, new shaft and prop, depth sounder, 3.8 BMC diesel, all new electrics and sport Yak tender, £2,500 ono, telephone Swansea 66443.

"MY Melody", forward wheelhouse, traditional Cornish Tosher, 29.6ft. x 9.3ft. x 3.6ft., built Dixons, Exmouth, pitch pine oak, Lister diesel, rewired, VHF., R/T., engine overhauled. New stern gear, new Spencer Carter self hauling sheave. New Simrad fish finder Price £4,800. Telephone: Penryn 74764 evenings.

STERN trawler 31ft. GRP Tyler hull, four years old, forward wheelhouse varnished, BMC diesel overhauled, 2:1 reduction, one ton hydraulic winch, all ready to work. £0,950, no offers, extra gear if required. 26ft. x 9ft. x 2ft., Cornish built, suitable angling netting or crabbing, 16hp Volvo diesel, overhauled, forward wheelhouse, varnished mahogany and five benches for 12 passengers, repainting. Price £4,000. Telephone: Brixham 6577.

Call Captain Joe Honywill
-for full details of the following

72ft. M.V.— CARVEL, teak on steel. Ex German Navy. Gardner 8L3 152hp. Gardner aux. gen. and pump. 4 berths f'wd. Open cockpit aft. Scotland. £15,000 o.n.o. Q.14.

45ft. M.F.V./WORKBOAT. Steel. 1972. Gardner 6LX main & 5LW wing. Hyd. steering. ½ ton winch. Spacious work deck. R/T. Lying Plymouth. £27,500. Q.6.

26ft. FAST F.V. Watson hull. 1975 to WFA. Cummins 240 hp. V.8 giving approx. 17kts. Aft wh'house. 2 bunks & galley fwd. Radar. R/T. Autopilot, etc. Lying Essex. £24,000. Q.15.

32ft. AQUASTAR PROFESSIONAL FISHERMAN. 1975. BLMC 100hp. diesel; PRM box. 2 berths; WC; galley. Avon 6 man raft. Ferro G500 E/S; VHF. V.G. condition. Plymouth. £10,800. Q.1.

28ft. CORNISH CRABBER. B'lt Penn of Looe, iroko on oak. Thorneycroft 72hp diesel. ½ ton capstan. 2 cots. Open boat layout. Del. Oct. 77 & never used. Cost £13,500. Must sell. Lying S. Wales. £8,000. Q.8.

IP24 registered fishing vessel. Mercedes 42hp diesel. little used, two berth, wc and galley. Seascribe sounder. £8,000.

Westord Seacraft
Heron Creek,
Yealm Road,
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Plymouth PL8 1BJ.
Tel: (0752) 872343 Evenings
or (0752) 28585 Daytime.

20ft. x 7ft. 6in. Angling/Workboat, transom stern, clinker, 20hp Lister diesel, echo sounder, forward wheelhouse, cabin, cooker, nav. lights, £900. Telephone: Whitstable 264421 Kent (evenings only).

36ft. steel Fishing Boat, Dutch built, 1974, two ton trawl winch, set trawl doors, two trawls with new wire, hydraulic pot hauler, forward and aft gantry, forward wheelhouse, 115hp Perkins engine completely rebuilt November 1977, new Borg Warner 2:1 reduction gearbox, completely re-wired, VHF radio, new ferrograph, echo sounder, new propeller, Kort Nozle new deck lights, forward accommodation, new batteries, working from Arbroath. Telephone: Arbroath 76362.

STEEL fishing boat hull, 31ft. 6in. x 10ft. 10in. x 2ft. 6in., built ¼in. steel plate, two fuel tanks, no engine or other equipment. Lying in our yard. Offers invited. Winters Boatyard Ltd., 23 Fore Street, Salcombe, Devon, telephone: Salcome 2561.

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Fitted out to owners requirements.

15ft. Punt from	£475
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HALMATIC 36ft. x 12ft 10ins. x 4ft., forward wheelhouse, large open deck, small fish hold, Perkins 6354/3:1 reduction, 2 ton split hydraulic winch, Lebus spooling, auto pilot, KH MS 39 sounder, Sailor VHF, cooker, sink, 4 berth, gantry aft, ½ ton pot hauler, WFA grant and loan transferrable, offers close 5th June 1978, fishing from Caernarvon, N. Wales. E. Owen, 12 Bro Arfon, Upper Llandwrog, Caerns.

LANDING craft 43ft. x 10ft. 6in., wheelhouse, twin Foden motors, Morse controls, approximate speed 9 knots, recently painted and overhauled. £4,000 ono Telephone: Luing 234.

Originally built for shark fishing and an ideal boat for charter work etc.
36ft. MOTOR CRUISER, double diagonal hull in mahogany, petrol engine Chrysler V8 235hp recently overhauled, 11ft. 3in. beam, 3ft. 6in. draw, 25-30 knots, w.c., sink unit, sleeps four, large open deck, ship to shore 66 Sailor radio, automatic bilge pump, sea-safe automatic fire extinguisher.
Boat in excellent condition, hardly used owing to business commitments.
Lying Ilfracombe harbour.
To inspect and further details, please telephone: (0271) 63561.
Price £13,000.

REGISTERED MFV 21ft. x 8ft., GRP heavy duty, forward wheelhouse, stern gantry and rollers, sealed deck, scuppers, Petters twin cylinder diesel, filer hauler, two berth, Calor stove, stainless sink, all lights, dynamo etc., best offer or part exchange for larger GRP or steel fishing or work boat 23ft. to 40ft. cash either way. Telephone: Pembroke 4547.

MFV 29ft. x 9ft. 6ins. x 3ft. 3ins., steel construction, forward wheelhouse, hydraulic hauler, Ford 4D 56hp, Paragon 2:1, some gear, ready to work, £3,500 o.n.o., telephone (0202) 747005.

1974 24ft. Mac boat, McKay hauler, sounder, ideal single-handed creel boat. Telephone: Ballachulish 288.

FOR SALE
MFV
"ACCORD" (FR.11)
Built of wood by J. & G. Forbes Co., Sandhaven, Nr. Fraserburgh, 1968.
Overall length 54ft., registered length 50.5ft., breadth 18.2ft., depth 6.6ft., tonnage gross and nett 23.16.
Main engine Kelvin TS8 240bhp at 1000 rpm, 3½:1 reduction gear/Kort nozzle, Tenfjord H70 steering gear, Mastra hydraulic combination winch, Catermarine power block.
BOAT'S PROPERTY: Saxon Warrior SSB R/T, Marconi graphette echo meter, watch keeping receiver.
ON HIRE: Marconi Koden fish graph K echometer, Kelvin Hughes 17 radar with DRM, Sailor R/T 144 VHF, Decca Mk12 navigator and track plotter.
Quantity of fishing gear.
Offers for the above vessel should be sent in sealed envelopes not later than 3pm on 14th July 1978, when they will be opened to:
PETER & J. JOHNSTONE LIMITED
7 Balaclava, Fraserburgh AB4 5EB
Telephone: (03462) 2366 and 3563
For further details and viewing arrangements may be obtained.

73ft. Aberdeen Sputnick trawler, built Lewis 1961. 264hp Blackstone, good working order, rigged for trawling and scallop dredging. W. Edwards, telephone Loch Maben 038 781 593.

SEAWORKER 22, 1975, Ford 65hp, echo sounder, Enfield Z-drive, good condition, delivery arranged, £3,000 o.n.o., telephone Glencaple 314.

1975 Versatility GRP 30ft., forward wheelhouse, sealed decks, fishold, mizzen, Petter 45hp engine, Hydema line/net hauler, Koden sounder on hire. Seavoice VHF boat's property. Depmar 131 sounder, available at extra cost. Ideal all purpose boat, £11,000. Telephone: Whitby 2154 evenings.

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Lochin 33 "Sika" built 1976. Ford turbo-plus 250hp diesel, very full specifications including radar and VHF radio.
£19,500
Fairy Huntress 23 "Lazey Doll", two berth sea going sports cruiser, single S6M 120hp diesel, excellent inventory.
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PILOT 520, 1974, Cathedral hull, fully equipped, little used, trailer and 33hp Johnson. Telephone: 08242 3207 will split.

LICENSED passenger vessel DTI class six, 55ft. x 12ft. x 3ft. 6in., 55 passengers, can be inspected, survey report and photo's available. *Reasonable berth needed for replacement.* Telephone: 0262 75663.

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LOCHIN 33 forward wheelhouse, 175hp Perkins, G500 Ferrograph, Seavoice hydraulic capstan. — Telephone: Weymouth 72297.

20ft. open motor boat, clinker, 10hp electric start Lister diesel, £1,200. Telephone: Salcombe 3479 or 2903.

16.81 x 4.70 x 1.49 metres, MFV steel, Mercedes 275hp D77 £135,000
31ft. x 9ft. x 3ft.6in., GRP, Ford 108hp D70 £8,500
60ft. MFV, wood, 24.86 tons, Callesen 180 hp D69 £44,000
20 x 6.04 x 2.81 metres, MFV, wood, two Baudouin 150hp each D68 £33,500
17.90 x 5.70 x 2.70 metres, MFV, wood, Poyaud 240hp D66 £39,500
76ft. MFV, wood, Dorsent 328hp D27 £17,700
36ft. x 12ft. x 3ft. 9in., MFV, GRP Cummins 240hp D24 £24,500
67ft., wood, Grenaa 560hp D78 £107,000
66ft. x 8ft. x 15.5ft., steel coaster, Kelvin 240hp J2 £22,000
22.56 x 6.10 x 2.67 car passenger ferry, steel, 58 passengers, 10 cars J21 £29,000

EBB SHIPBROKERS LTD
33 Gray Street, Broughty Ferry, Dundee
Telephone: (0382) 737605/736030 or Monifieth 3171 evenings.

29ft. x 9ft. x 5ft. carvel boat, small forward offside wheelhouse, flush deck, cuddy, below Mercedes Benz 42hp, ¼ ton North Sea Winch, VHF and MF sets, automatic and hand bilge pumps, ideal vessels for single handed fishing, £5,250. Also 17ft. Dory, foam filled, decked floor, £300, telephone Portsmouth 28480.

54ft. x 16ft., 24 ton inshore Scottish built trawler, Gardner 5L3 engine, complete with all fishing gear £11,000. Telephone: Scarborough 60197 evenings.

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Length 56.3ft. x 17.3ft. x 6.6ft., engine 6L3 114hp Gardner uprated to 130hp. 2.1 reduction gear, major overhaul March 1977.
Reconditioned six speed Sutherland trawl winch installed October 1977.
New Sailor SSB radio, new Sailor watch receiver, Kelvin Hughes radar type 17. Kelvin Hughes VHF, Kelvin Hughes MS29 sounder, Decca Mk 21 and 350T plotter. The vessel has been well maintained and is in first class working order.
Closing date for offers 23rd June 1978
Telephone:
TARBERT 267 or
CAMPBELTOWN 2159

NEW crabber 33ft. x 12ft. 6ins. x 4ft., flush deck, large fish hold, teak woodwork, well fitted wheelhouse, cooker sink, Helman and crew, seating for six, foremast and derrick, mizzen mast, Gardner 5LW, 2:1 hydraulic gearbox, Depmar sounder, radar, VHF radio, hydraulic steering, £20,500. Telephone Littlehampton 7643 evenings.

50ft. steel trawler, 265 hp engine recently fitted, £12,000 refit just completed, fully equipped and now working £25,000, telephone 0562 700320 or 700570.

VERSATILITY 25ft., purpose built angling/fishing, aft wheelhouse, morse control, licenced, £1,500 refit April, electrics, lifesaving gear new. Price £6,300. Telephone Thanet 23107/22063.

IP 23, length 23ft., beam 9ft. 9in., draft 3ft., Lister SW2 MGR 15hp diesel engine, with hand and electric start, Jabsco power bilge pump and teleflex steering. Offers, Box No. 879.

38ft. x 12ft. x 4ft. 6ins., flush deck, all steel, 3 years old, Gardner 6, all life saving equipment, FM and VHF hydraulic winch, beam trawling, view anytime, £8,500 o.n.o., telephone Newcastle-upon-Tyne 739662.

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30ft. angling lobster boat, Ford 80hp, ideal creel passenger, built 1968, view Donaghadee or Port Patrick, survey available. Telephone: Donaghadee 0247 883050 or Rockcliffe, Kirkcudbright 231.

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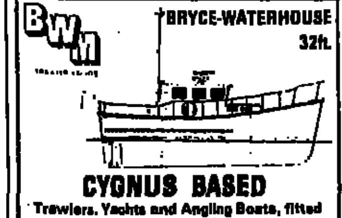
32ft.



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HULLS GRP mouldings, heavy duty to WFA standards, 19.5, 21 and 23ft., from £500 to £950. Peel Marine Ltd, Riverside, Teignmouth, telephone: (06267) 2324.

SEAWORKER 22, 1975, 65hp Ford, immaculate condition, fully fitted, new Motorola radio, echo sounder, Sumlog. Full inventory. £6,500. Telephone: Herne Bay 4977.

STERN trawler, 38ft. x 18ft. x 6ft. approx, DNK4 Baudouin, forward wheelhouse, gallows aft, trawl winch, VHF, sounder, Decca etc., rigged bottom trawling, working, full details Box No. 883.

MARET R.169
Wooden vessel built 1963, re-engined 1969 with Henschel six cylinder 150hp, registered length 39.9ft., breadth 14ft., GRT 17.27, NRT 7.77, listed for trawling, trammel netting and potting. R/T sounder and watchkeeper all ship's property. Navigator, radar and VHF on hire.
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Langdales Wharf, Bridlington.
Telephone: (0262) 76986

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32ft. length, 11ft. beam, fast lobster angling boat, fitted with twin Ford engine, whole boat in first class condition. For further particulars telephone: Lybster, Caithness 425.

MFV "COASTAL BOY"
28ft. x 10ft. x 3ft. 6in.
Heavily built steel workboat, forward wheelhouse new flush deck 3 cylinder Lister marine diesel 2:1 reduction box, pot hauler, sounder, deckwash, nets all gear
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SPECIAL OFFER
Cod and pollock sheet netting, two ten/nine twine 5½in. mesh by 20½in. meshes deep by 1,000 meshes long
£16 plus VAT
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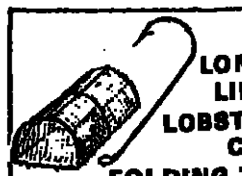

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Extra heavy P.U. nylon aprons. Alkali/acid resistant. Colour grey £4.65 each.

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(available in any length up to 500 yds)
★ PRICES ON APPLICATION ★

HERRING OR MACKEREL NETS

Twine size	Mesh size	Depth
[illegible] or 2Z	2"	120
[illegible] or 2Z	2"	180

GILL NETS & TRAMMEL INNERS

Twine size	Mesh size	Depth
[illegible] or 2Z	4"	30
[illegible] or 2Z	4"	50
[illegible] or 2Z	5"	30
[illegible] or 2Z	5"	50
[illegible] or 3Z	4"	30
[illegible] or 3Z	4"	50
[illegible] or 3Z	5"	30
[illegible] or 3Z	6"	50
[illegible] or 4Z	4"	30
[illegible] or 4Z	4"	50
[illegible] or 4Z	5"	30
[illegible] or 4Z	5"	50

SHEET MONOFILAMENT GILL NETTING
(blue or green)
For Herring, Mackerel, Freshwater fish, Mullet, Bass, Salmon, Sea-Trout.

Twine size	Mesh size	Depth
0.20	1½"	250
0.20	2"	200
0.20	2½"	150
0.40	3"	100
0.40	3½"	60
0.40	4"	60
0.40	4½"	60
0.52	4¾"	60
0.52	5"	60
0.65	4½"	60
0.52	4¾"	60
0.52	6"	60
0.65	5½"	60
0.65	6"	60

MONOFILAMENT BASS OR COD NETS — FULLY RIGGED

5" x 30' x 0.65 x 66 yards — £48
132 yards — £95

★ FULLY RIGGED TRAMMEL & GILL NETS AVAILABLE IN ALL SIZES FROM £30 ★

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HARD TWISTED POLYETHYLENE TRAWL NETTING
10/27 3" 200 x 100 md Yellow — £28.60
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Also available in bales 2000 x 100 meshes
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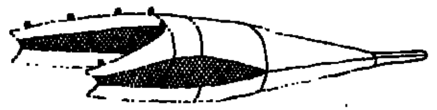

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Available in two Bridle or three Bridle versions — single boat or pair operation

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206	12 fathom	£225	£265
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6ft	£40
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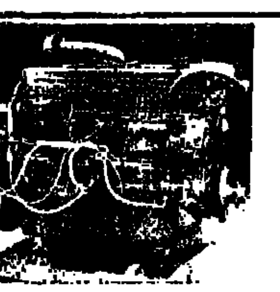

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